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Ways and Means Committee Reports Tariff Bill

Comparatively Few Alterations Made On Paper In New Measure Submitted on Tuesday—No Mention of Definition of News Print—China Clay Remains in Bill at $2.50 Per Ton and Casein Remains At Old Rate of 2½ Cents Per Pound—Fourdrinier and Cylinder Wires Placed at 55 Per Cent Ad Valorem

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 8, 1929.—After four months of work the Ways and Means Committee has reported out the tariff bill. A number of changes in both rates and phrasing were made in the paper schedule.

One of the interesting points of the bill from the standpoint of the paper manufacturers is the fact that "standard newsprint paper" is on the free list but nowhere in the bill is there any mention of a definition.

China clay or kaolin remains in the bill at $2.50 per ton; casein is still dutiable at 2½ cents per pound while jute butts, waste bagging and waste for paper making are left on the free list.

On woven wire cloth, present rates are 35 and 45 per cent ad valorem, new are 40 to 50 per cent. The new language provides that fourdrinier wires and cylinder wires, suitable for use in paper making machines, and woven wire cloth suitable for use in the manufacture of fourdrinier wires or cylinder wires pay 55 per cent ad valorem.

The paper schedule of the bill as it was reported is as follows:

Schedule 14.—Papers and Books

PAR. 1401. Uncoated papers commonly or commercially known as book paper, and all uncoated printing paper, not specially provided for, not including cover paper, one-fourth of 1 cent per pound and 10 per centum ad valorem: *Provided*, That if any country, dependency, province, or other subdivision of government shall forbid or restrict in any way the exportation of (whether by law, order, regulation contractual relation, or otherwise, directly or indirectly), or impose any export duty, export license fee, or other export charge of any kind whatsoever (whether in the form of additional charge or license fee or otherwise) upon printing paper, or wood pulp, or wood for use in the manufacture of wood pulp, the President may enter into negotiations with such country, dependency, province, or other subdivision of government to secure the removal of such prohibition, restriction, export duty, or other export charge, and if it is not removed he may, by proclamation, declare such failure of negotiations, setting forth the facts. Thereupon, and until such prohibition, restriction, export duty, or other export charge is removed, there shall be imposed upon printing paper provided for in this paragraph, when imported either directly or indirectly from such country, dependency, province, or other subdivision of government, an additional duty of 10 per centum ad valorem and in addition thereto an amount equal to the highest export duty or other export charge imposed by such country, dependency, province, or other subdivision of government, upon either an equal amount of printing paper or an amount of wood pulp or wood for use in the manufacture of wood pulp necessary to manufacture such printing paper.

PAR. 1402. Paper board, wallboard, and pulpboard, including cardboard, and leather board or compress leather, not glazed, laminated or pasted, coated, lined, embossed, printed, decorated or ornamented in any manner, nor cut into shapes for boxes or other articles and not specially provided for, 10 per centum ad valorem: *Provided*, That for the purposes of this Act any of the foregoing less than twelve one-thousandths of one inch in thickness shall be deemed to be paper; sheathing paper, roofing paper, deadening felt, sheathing felt, roofing felt or felt roofing, whether or not saturated or coated, 10 per centum ad valorem. If any country, dependency, province, or other subdivision of government imposes a duty on any article specified in this paragraph, when imported from the United States, in excess of the duty herein provided, there shall be imposed upon such article, when imported either directly or indirectly from such country, dependency, province, or other subdivision of government, a duty equal to that imposed by such country, dependency, province, or other subdivision of government on such article imported from the United States.

PAR. 1403. Filter masse or filter stock, composed wholly or in part of wood pulp, wood flour, cotton or other vegetable fiber, 20 per centum ad valorem; indurated fiber ware, masks composed of paper, pulp or papier-mache, manufactures of pulp, and manufactures of papier-mache, not specially provided for, 25 per centum ad valorem.

PAR. 1404. Papers commonly or commercially known as tissue paper, stereotype paper, and copying paper, india and bible paper, condenser paper, carbon paper, coated or uncoated, bibulous paper, pottery paper, tissue paper for waxing, and all paper similar to any of the foregoing not specially provided for, colored or uncolored, printed or unprinted, weighing not over six pounds to the ream, and whether in sheets or any other form, 6 cents per pound and 20 per centum ad valorem; weighing over six pounds and less than ten pounds to the ream, 5 cents per pound and 15 per centum ad valorem; india and bible paper weighing ten pounds or more and less than eighteen pounds to the ream., 4 cents per pound and 15 per centum ad valorem; crepe paper, commonly or commercially so known, including paper crêped or partly crêped in any manner, 6 cents per pound and 15 per centum ad valorem: *Provided*, That no article composed wholly or in chief value of one or more of the papers specified in this paragraph shall be subject to a less rate of duty than that imposed upon the component paper of chief value of which such article is made: *Provided further*, That the term "ream" as used in this paragraph means two hundred and eighty-eight thousand square inches.

PAR. 1405. Papers with coated surface or surfaces, not specially provided for, 5 cents per pound and 15 per centum ad valorem; papers with coated surface or surfaces, embossed or printed otherwise than lithographically, and papers wholly or partly covered with metal or its solutions (except as herein provided), or with gelatin, linseed oil cement, or flock, 5 cents per pound and 15 per centum ad valorem; papers, including wrapping paper, with the surface or surfaces wholly or partly decorated or covered with a design, fancy effect, pattern, or character, except designs, fancy effects, patterns, or characters produced on a paper machine without attachments, or produced by lithographic process, 4½ cents per pound, and in addition thereto, if embossed, or printed otherwise than lithographically, or wholly or partly covered with metal or its solutions, or with gelating or flock, 18 per centum ad valorem: *Provided,* That paper wholly or partly covered with metal or its solutions, and weighing less than fifteen pounds per ream of four hundred and eighty sheets, on the basis of twenty by twenty-five inches, shall be subject to a duty of 5 cents per pound and 20 per centum ad valorem; gummed papers, not specially provided for 5 cents per pound; simplex decalcomania paper not printed, 5 cents per pound and 10 per centum ad valorem; cloth-lined or reinforced paper, 5 cents per pound and 17 per centum ad valorem; papers with paraffin or wax-coated surface or surfaces, vegetable parchment paper, grease-proof and imitation parchment papers which have been supercalendered and rendered transparent or partially so, by whatever name known, all other grease-proof and imitation parchment paper, not specially provided for, by whatever name known, 3 cents per pound and 15 per centum ad valorem; bags, printed matter other than lithographic, and all other articles, composed wholly or in chief value of any of the foregoing papers, not specially provided for, and all boxes of paper or papier-mâché or wood covered or lined with any of the foregoing papers or lithographed paper, or covered or lined with cotton or other vegetable fiber, 5 cents per pound and 20 per centum ad valorem; plain basic paper ordinarily used in the manufacture of paper commonly or commercially known either as blue print or brown print, and plain basic paper ordinarily used for similar purposes, 20 per centum ad valorem; sensitized paper commonly or commercially known either as blue print or brown print, and similar sensitized paper, 25 per centum ad valorem; unsensitized basic paper, and baryta coated paper, to be sensitized for use in photography, 5 per centum ad valorem, sensitized paper, paper to be used in photography, 30 per centum ad valorem; wet transfer paper or paper prepared wholly with glycerin or glycerin combined with other materials, containing the imprints taken from lithographic plates or stones, 65 per centum ad valorem.

PAR. 1406. Pictures, calendars, cards, labels, flaps, cigar bands, placards, and other articles, composed wholly or in chief value of paper lithographically printed in whole or in part from stone, gelatin, metal, or other material (except boxes, views of American scenery or objects, and music, and illustrations when forming part of a periodical or newspaper, or of bound or unbound books, accompanying the same), not specially provided for, shall be subject to duty at the following rates: Labels and flaps, printed in less than eight colors (bronze printing to be counted as two colors), but not printed in whole or in part in metal leaf, 30 cents per pound; cigar bands of the same number of colors and printings, 35 cents per pound; labels and flaps printed in eight or more colors (bronze printing to be counted as two colors), but not printed in whole or in part in metal leaf, 40 cents per pound; cigar bands of the same number of colors and printings, 50 cents per pound; labels and flaps, printed in whole or in part in metal leaf, 60 cents per pound; cigar bands, printed in whole or in part in metal leaf, 65 cents per pound; all labels, flaps, and bands, not exceeding ten square inches cutting size in dimensions, if embossed or die-cut, shall be subject to the same rate of duty as hereinbefore provided for cigar bands of the same number of colors and printings (but no extra duty shall be assessed on labels, flaps, and bands for embossing or die-cutting); transparencies, printed lithographically or otherwise, in not more than five printings (bronze printing to be counted as two printings), 40 per centum ad valorem; in more than five printings (bronze printing to be counted as two printings), 50 per centum ad valorem: *Provided,* That all invoices shall state the number of separate printings actually employed in the production of the transparency; fashion magazines or periodicals, printed in whole or in part by lithographic process, or decorated by hand, 8 cents per pound: decalcomanias in ceramic colors, weighing not over one hundred pounds per one thousand sheets on the basis of twenty by thirty inches in dimensions, 70 cents per pound and 15 per centum ad valorem; weighing over one hundred pounds per one thousand sheets on the basis of twenty by thirty inches in dimensions, 50 cents per pound and 15 per centum ad valorem; all with metal leaf, 40 cents per pound; if backed with metal leaf, 65 cents per pound; all articles other than those hereinbefore specifically provided for in this paragraph, not exceeding eight one-thousandths of one inch in thickness, 30 cents per pound; exceeding eight and not exceeding twenty one-thousandths of one inch in thickness, and less than thirty-five square inches cutting size dimensions, 15 cents per pound; exceeding thirty-five square inches cutting size in dimensions, 12 cents per pound, and in addition thereto on all said articles exceeding eight and not exceeding twenty one-thousandths of one inch in thickness, if either die-cut or embossed, 1 cent per pound; if both die-cut and embossed, 2 cents per pound; exceeding twenty one-thousandths of one inch in thickness, 10 cents per pound: *Provided,* That in the case of articles hereinbefore specified the thickness which shall determine the rate of duty to be imposed shall be that of the thinnest material found in the article, but for the purposes of this paragraph the thickness of lithographs mounted or pasted upon paper, cardboard, or other material shall be the combined thickness of the lithograph and the foundation on which it is mounted or pasted, and the cutting size shall be the area which is the product of the greatest dimensions of length and breadth of the article, and if the article is made up of more than one piece, the cutting size shall be the combined cutting sizes of all of the lithographically printed parts in the article.

PAR. 1407. (a) Correspondence cards, writing, letter, note, drawing, and handmade paper, paper commonly or commercially known as handmade or machine handmade paper, japan paper and imitation japan paper by whatever name known, Bristol board of the kinds made on a Fourdrinier or a multicylinder machine, ledger, bond, record, tablet, typewriter, manifold, onionskin, and imitation onionskin paper, and paper similar to any of the foregoing, all the above weighing eight pounds or over per ream, 3 cents per pound and 15 per centum ad valorem; if ruled, bordered, embossed printed, lined, or decorated in any manner, whether in the pulp or otherwise, other than by lithographic process, 10 per centum ad valorem in addition; correspondence cards, and writing, letter, and note paper, in sheets less than one hundred and ten square incheas in area, shall be subject to an additional cumulative duty of 5 per centum ad valorem.

(b) Sheets of writing, letter, and note paper, with border gummed or perforated, with or without inserts, prepared for use as combination sheet and envelope, and papeteries, 40 per centum ad valorem. The term "papeteries" as used in this paragraph means writing, letter, or note paper, or correspondence cards, together with the envelopes, packed or assembled into boxes, portfolios, folders, or other containers, in which such articles are sold as a unit to the ultimate consumer, including such containers.

(c) The term "ream" as used in this paragraph means one hundred and eighty-seven thousand square inches.

PAR. 1408. Paper envelopes not specially provided for shall be

subject to the same rate of duty as the paper from which made and in addition thereto, plain, 5 per centum ad valorem; if bordered, embossed, printed, tinted, decorated, or lined, 10 per centum ad valorem; if lithographed, 30 per centum ad valorem.

PAR. 1409. Jacquard designs on ruled paper, or cut on Jacquard cards, and parts of such designs, 35 per centum ad valorem; paper commonly or commercially known as wall paper, composed in chief value of paper, printed, lithographed, dyed, or colored, but not wholly or partially covered with linseed oil cement, or flock 30 per centum ad valorem; wrapping paper not specially provided for, 30 per centum ad valorem; blotting paper, 30 per centum ad valorem; filtering paper, 30 per centum ad valorem; paper commonly or commercially known as cover paper, plain, uncoated, and undecorated, 30 per centum ad valorem; paper not specially provided for, 30 per centum ad valorem.

PAR. 1410. Unbound books of all kinds, bound books of all kinds except those bound wholly or in part in leather, sheets or printed pages of books bound wholly or in part in leather, pamphlets, music in books or sheets, and printed matter, all the foregoing not specially provided for, if of bona fide foreign authorship, 15 per centum ad valorem; all other, not specially provided for, 25 per centum ad valorem; blank books, slate books, drawings, engravings, photographs, etchings, maps, and charts, 25 per centum ad valorem; book bindings or covers wholly or in part of leather, not specially provided for, 30 per centum ad valorem; books of paper or other material for children's use, printed lithographically or otherwise, not exceeding in weight twenty-four ounces each, with reading matter other than letters, numerals, or descriptive words, 15 per centum ad valorem; booklets, printed lithographically or otherwise, not specially provided for, 7 cents per pound; booklets, wholly or in chief value of paper, decorated in whole or in part by hand or by spraying, whether or not printed, not specially provided for, 15 cents per pound; all post cards (not including American views), plain, decorated, embossed, or printed except by lithographic process, 30 per centum ad valorem; views of any landscape, scene, building, place or locality in the United States, on cardboard or paper, not thinner than eight one-thousandths of one inch, by whatever process printed or produced, including those wholly or in part produced by either lithographic or photogelatin process (except show cards), occupying thirty-five square inches or less of surface per view, bound or unbound, or in any other form, 15 cents per pound and 25 per centum ad valorem; thinner than eight one-thousandths of one inch, $2 per thousand; greeting cards, valentines, and all other social and gift cards, 35 per centum ad valorem; in the form of folders and booklets, 45 per centum ad valorem.

PAR. 1411. Photograph, autograph, scrap, post-card and postage-stamp albums, and albums for phonograph records, wholly or partly manufactured, 30 per centum ad valorem.

PAR. 1412. Playing cards, 10 cents per pack and 20 per centum ad valorem.

PAR. 1413. Papers and paper board and pulpboard, including cardboard and leather board or compress leather, embossed, cut, die-cut, or stamped into designs or shapes, such as initials, monograms, lace, borders, bands, strips, or other forms, or cut or shaped for boxes or other articles, plain or printed, but not lithographed, and not specially provided for; paper board and pulpboard, including cardboard and leatherboard or compress leather, laminated, glazed, coated, lined, printed, decorated, or ornamented in any manner; press boards and press paper, all the foregoing, 30 per centum ad valorem; test or container boards of a bursting strength above sixty pounds per square inch by the Mullen or the Webb test, 20 per centum ad valorem; stereotype-matrix mat or board, 35 per centum ad valorem; wall pockets, composed wholly or in chief value of paper, papier-mâché or paper board, whether or not die-cut, embossed, or printed lithographically or otherwise; boxes, composed wholly or in chief value of paper, papier-mâché or paper board, and not specially provided for; manufactures of paper, or of which paper is the component material of chief value, not specially provided for, all the foregoing, 35 per centum ad valorem.

Improvements at MacSimbar Plant

KALAMAZOO, Mich., May 6, 1929.—A campaign to clean out and purify what President C. E. Nelson, president of the MacSimbar Paper Company, Otsego, personally chooses to term a former sink hole, is bringing results. A visitor to that plant in Kalamazoo's hustling northern suburb would hardly know the property, had he been away for a period of over three years.

The low river bottom, once muddy and marshy in rainy seasons, has been leveled, raised and either concreted or graveled and is now hard and firm under foot. The large area adjoining, once but a sand pit, has been parked and boasts a fine green sward, with many trees and flower beds flourishing. A steel and concrete fence surrounds the whole property, while a gateman is maintained, with a gate house at the main entrance.

President Nelson explains that this parking feature is to be extended and carried forward until all the area around the old Wolverine Paper Company's plant has been converted into a sightly locality. Great heaps of debris are now being hauled away, ditches filled and the land graded. It will require two to three years to complete that work, but when finished will be a great improvement in that section of Otsego.

In the MacSimbar plant proper the latest improvement has been the erection and equipment of a unit for cutting rolls of board. Two large cutters have been installed. These can be geared to any size sheet desired. Another improvement, sufficiently tested to be recognized as a success has been the installation of a system to treat all boiler water. All scale and lime are removed and the boilers will as a result operate indefinitely with cleaning and overhauling.

The rebuilt machine, now equipped with 161 dryers, said to be the largest machine of its kind in America, produces 150 tons daily, giving the mill an output of 12 carloads a day. Everything in the mill is run by electricity. There is a battery of three turbines installed, two for constant use and one in reserve.

The old Wolverine Paper plant is being overhauled and is now used by the Otsego Wax Paper Company, a subsidiary of the MacSimbar Paper Company. This concern makes millions of waxed wrappers weekly. The raw stock is purchased from the Kalamazoo Vegetable Parchment Company and then converted in the Oswego plant.

This unit has been developed during the past two years and is growing rapidly in importance. President Nelson is directly in charge of all sales in both the board and waxed paper divisions.

Distribution Studies

Major O. M. Porter, secretary of the American Paper and Pulp Association, speaking before the 17th Annual Meeting of the United States Chamber of Commerce in Washington, on May second, in support of the Association's declaration to the Resolutions Committee of the National Chamber, as follows,

"Congress should provide more adequate appropriations to permit the Division of Domestic Commerce of the Department of Commerce to undertake detailed cooperative distribution studies with those fields of industry which are interested" said:

"Much of this nation's progress and prosperity has been due to its successful application of mass production; but distribution on which all business is dependent has not kept pace with mass production.

More efficient and less wasteful methods of distribution are essential to a continuation of the useful public service of many industries. This problem concerns all important national industries.

In the Department of Commerce the government has facilities for useful service to industry and to the public. Frequently, it can induce cooperation from individual units of industry which cannot be achieved by the trade associations of that industry.

Big Chemical Show Proves Outstanding Success

Twelfth Exposition of Chemical Industries Attracting Thousands of Industrial Chemists, Engineers, etc., to Grand Central Palace, New York—More Than 400 Exhibitors Present Instructive and Attractive Displays—New Products and Processes Shown

Thousands of chemists, chemical and research engineers, manufacturers and buyers from forty odd industries, are being attracted to the Twelfth Exposition of Chemical Industries, which opened Monday afternoon in the Grand Central Palace, New York, and which will be continued until the evening of Saturday, May 11.

The Exposition is a remarkably comprehensive revelation of that which is basic in all industry—a display of the culmination of what chemical engineers and manufacturers have co-operatively developed, chiefly during the past few decades, and especially during the last few seasons. The importance of chemistry to national progress and welfare is splendidly exemplified at the Palace this week. There are more than four hundred exhibitors.

Arthur D. Little Launches Show

The Exposition was launched at 2 o'clock on Monday by Arthur D. Little, noted chemical engineer and chairman of the Show Committee, who made the opening address. In this he was assisted by "Mr. Televox," the Westinghouse Company's electrical man, who, at Dr. Little's verbal request, responded and blew a musically toned horn, giving the Exposition its official start.

Upon inspecting the Exposition, the visitor is impressed with the great number of new products and processes—new alloys and synthetic products in profusion. Many of these are most timely and related to aviation, radio, television, talking pictures, etc.

Sensitive Measuring Devices

Measuring instruments so sensitive that they will record the bending of a steel rail under the pressure of a little finger, might well be tabulated among the wonders of the twentieth century. A new measuring device, so impressionable that it can be made to measure down to one-twenty-millionth of an inch, brings to light the fact that almost everything will bend or bulge at a concentrated pressure on one particular spot—even concrete walls and steel rails. Experiments have been tried with both, and the degree of expansion was visible under the microscope, by means of interference with light rings.

New Ferrous Alloys

The Exposition is particularly strong this year in the new ferrous alloys which are designed to resist corrosion. These metals are used in the making of machinery and equipment as well as structural material and apparatus. These alloys are the results of research during the past few years and the results of this research work is shown at the Exposition. There are several outstanding developments in this field which are exhibited, one of which is the new Krupp Nirosta steel which is variously known as Enduro Nirosta Steel, and the new Baker & Co. alloy, Rhodium, which is a precious or rare metal used for stiffening the crucible and reducing the heat and acid losses.

Interesting Government Exhibits

The United States Government exhibit is from the Departments of Commerce and Agriculture, and includes an exhibit from the Bureau of Mines, Bureau of Standards and Bureau of Foreign and Domestic Commerce. The first two Bureaus show results of research during the past few years, annd the latter Bureau is represented by the Chemical Division, which acts as a semi-liason between manufacturers and the United States Government to promote foreign trade. The U. S. Department of Agriculture has exhibits from the Bureau of Chemistry and Soils and the Bureau of Plant Industry, Animal Industry and Entomology. The Chemical Warfare Service exhibits its peace-time work and what it has that is of value to industry.

Technical Association Program

An interesting feature of the Exposition was the program of the Technical Association of the Pulp and Paper Industry, given Wednesday, May 8, under the chairmanship of Secretary R. G. MacDonald. The speakers were as follows:

T. McLean Jasper, A. O. Smith Corporation, "Welded Paper Digesters."

M. W. Meyer, Anti-Hydro Waterproofing Company, "An Improved Paper Mill Concrete Floor."

Lee Wallis Gibbons, "High Chrome High Nickel Stainless Alloys in the Sulphite Process."

Charles Fuhrmeister, Jr., Oliver United Filters, Inc., "Continuous Filters Featuring Insulating Board Machines."

F. E. Huggins, Jr., Sowers Manufacturing Company, "Seamless Jacketed Mixers for Cutting Casein."

F. J. Shepard, Lewis-Shepard Company, "Shipping on Skid Platforms."

W. N. Greer, Leeds & Northrup Company, "Hydrogen Ion and Conductivity Measurements."

Annual Banquet of Chemical Industries

The Sixth Annual Chemical Industries Banquet at the Roosevelt Hotel, will be held tonight, Thursday, under the auspices of the Salesmen's Association of the American Chemical Industry. The guest speaker will be Colonel William J. Donovan, formerly of the United States Department of Justice, Washington. Collaborating in this banquet are the following scientific and technical organizations: American Association of Textile Chemists and Colorists, American Chemical Society, American Electro-chemical Society, American Institute of Chemists, American Leather Chemists Association, Chemical Warfare Association, Chemists' Club, Compressed Gas Manufacturers Association, Societe de Chemie Industrielle, Society of Chemical Industry, Synthetic Organic Chemical Manufacturers Association, Technical Association of the Pulp and Paper Industry, Chlorine Institute, Manufacturing Chemists Association, and the Salesmen's Association of the American Chemical Industry.

Among the many exhibits of special interest to the paper industry are the following:

Alberene Stone Co.

Laboratory equipment for industrial, educational and research institutions is displayed by the Alberene Stone Company, of New York. Alberene stone—natural quarried soap stone—has become the recognized standard for all working surfaces in laboratories. Stain-proof, acid and alkali proof, moisture proof, capable of being machined and fabricated to any desired design, Alberene continues to merit the approval of designers, builders, and users of laboratories.

Bailey Meter Co.

Long distance indicators and a new line of feed-water regulators feature the exhibit of the Bailey Meter Company, of Cleveland, Ohio. A recording and integrating gas meter, which is compensated for pressure variations is shown in operation, and a control drive, cut away to show action of clutches, limits, etc., is demonstrated. Other Bailey equipment on display includes a panel board fitted with boiler meter, and multi-pointer gage; an electrically operated fluid meter, and a gravity recorder.

Becker-Moore & Co., Inc.

Wood flour, a modern filler that is cutting production costs in many industries, is being demonstrated by Becker-Moore & Co., Inc., of North Tonawanda, N. Y. Becker-Moore Wood Flour, sometimes called powdered wood pulp, is finely pulverized wood.

The manufacturing process is similar to flour milling. It is an ideal filler, and as the cost per pound is very low it effects considerable saving when incorporated with more expensive ingredients. As an example, take an industry where the binder costs say forty cents per pound, the addition of fifty per cent Wood Flour at about two cents per pound brings the average cost per pound of the composition down to approximately twenty-one cents.

Electro Bleaching Gas Co.

Various grades of liquid chlorine are effectively displayed by the Electro Bleaching Gas Company, pioneer manufacturers, of Niagara Falls, N. Y., with offices at 9 East 41st street, New York City. The quality of the liquid chlorine made by this organization has always been maintained at the highest point. Co-operation of a nature vital to the utmost profit from the use of liquid chlorine is an integral part of the Electro Bleaching Gas Company's policy.

Enduro Nirosta Steels

Under the general heading of Enduro Nirosta Steels, a comprehensive exhibit is being shown jointly by the Central Alloy Steel Corporation, the Ludlum Steel Company and the Babcock and Wilcox Tube Company, licensees under the Krupp Nirosta patents. The exhibit includes various forms of Enduro KA2, the chrome nickel alloy that is at present attracting so much attention for its corrosion resistant and heat resistant properties.

The Fairbanks Co.

An interesting exhibit is being displayed by the Fairbanks Company, of New York, who are showing the following products: Fig. 0828 Sphero valve; Fig. 01 bronze globe valve, renewable Vulcabeston ring disk; Fig. 0201 bronze gate valve, renewable bronze seat rings; Fig. 0301-0304 iron body gate valves, renewable bronze seat ring; Fig 0600 standard bronze swing check valve; Fig. 0601 heavy bronze swing check valve; Fig. 0414 and 0416 U-bolt gate valves, bronze mounted and all iron.

Filtration Engineers, Inc.

One of the most interesting exhibits at the Exposition was that of Filtration Engineers, Inc., pioneers in filtering and conditioning clay, of 253 Broadway, New York City. This organization demonstrated an automatic filter of unlimited application combining continuous filtering and drying. Filtration Engineers also specialize in high and low submerged filters and Monel equipped drying systems.

Foote Bros. Gear & Machine Co.

The comprehensive exhibit of the Foote Brothers Gear and Machine Company, of Chicago, Ill., consists of a large variety of industrial gears and speed reducing units, illustrating the modern tendency to replace open gears with enclosed self-contained speed changing machines. Beside the IXL drives, the equipment of this organization includes mountings, hangers, bearings, bed-blades, etc.

The Foxboro Co.

Special interest is aroused by the exhibit of the Foxboro Company, of Foxboro, Mass. The feature of this display is the Foxboro duplex chromium-plating temperature controller in operation. This instrument is now in use on hundreds of chromium-plating tanks throughout the country. The new steam flowmeter is also on display in operation. This instrument of the Foxboro 100-type orifice meter construction is one of the most accurate yet evolved for steam flow measurement. It reads direct and totalizes the steam flow as well. Recording and indicating thermometers and gages as well as tachometers and other Foxboro instruments are also exhibited.

General Electric Co.

Touching upon many lines of industry, the General Electric Company, of Schenectady, N. Y., present an elaborate display of the standard and special products of this giant corporation. Included in the exhibit are: Motors and control of interest to the chemical industry; an educational exhibit from its laboratories with streamer discharge, Tesla coil and effects, thyratron tubes, photophone transparencies, a high-frequency and photo-electric applications. The voice-controlled toy train "Casey Jones," which obeys the commands "Go Ahead," "Back Up" and "Stop" is also shown.

Hazard Advertising Corp.

An artistic and comprehensive exhibit of advertising literature is displayed at the booth of the Hazard Advertising Corporation, well known advertising agents, of New York City. The exhibit includes many illustrations of advertisements appearing in leading trade publications.

The Hardinge Co., Inc.

Many features of interest are shown at the booth of the Hardinge Company, New York, and allied companies, Ruggles-Coles Engineering Division and Steacy-Schmidt Manufacturing Company. Working models of the Hardinge mill, the Ruggles-Coles drier, and the Hardinge filter are exhibited, as well as photographs of other equipment, including the Hardinge rod mills, batch mills, tube mills, air classifiers, calciners, coolers, thickeners, and clarifiers. Among the outstanding installations of Hardinge equipment are the Hardinge unit coal pulverizer for the direct firing of various furnaces, either for boilers or other purposes, the Ruggles-Coles calciner for the roasting or calcining of chemicals, ores, etc., the Hardinge thickener and clarifier for the thickening of pigments, chemicals, etc., and the clarification of sewage sludge, trade waste, and other solutions.

The Hauser-Stander Tank Co.

The Hauser-Stander Tank Company, of Cincinnati, Ohio, are exhibiting a number of model wooden tanks, together with other equipment used in connection with them; A model tank lined with Hauser-Stander special vulcanized rubber, used for storing acids and chemical solutions and for processing; A rubber-lined model tank car, as well as model acid pickling tanks, pressure vacuum tanks, filter frames, agitator equipment, etc., used in the chemical and allied industries.

Hendrick Manufacturing Co.

Perforated metal screens in steel and alloyed metals for pulp and paper mills are displayed by the Hendrick Manufacturing Company, Carbondale, Pa. The Mitco Interlocked Steel Grating is also an interesting feature of this booth where a steel grating staircase arouses much interest and attention. The Mitco interlocked gratings are neat in appearance, with flush face, easily cleaned and painted, and free from clogging, on account of the rectangular openings, with no acute angles to catch and to hold refuse. At the same time they give maximum light and ventilation.

International Paper Co.

Mulch paper is featured at the booth of the International Paper Company, New York. An attractive booklet describing the Miracle of Gator Hide Mulch Paper is being distributed to interested observers. Products of several International subsidiaries are also shown, including the Continental Paper and Bag Mills Corporation, the George and Sherrard Paper Company, and the Valdown Company.

Johns-Manville Co.

Typical filtration systems are shown in operation at the booth of the Johns-Manville Company, New York, a well known organization which provides complete insulation services. Whether insulation needs are for process work or for power plant equipment, for heat or cold—whether temperatures are high or low—the Johns-Manville Company offers a complete range of insulation of every type.

Joubert & Goslin Machine & Foundry Co.

Vallez rotating leaf filters are ably demonstrated at the large stand occupied by the Joubert and Goslin Machine and Foundry Company, of Birmingham, Alabama. These filters save all the fiber in black liquors, reclaiming at least 3½ pounds of pulp per 1,000 gallons of the black liquor. The evaporator capacity is thereby noticeably increased. Vallez filters clear out ash and other impurities from green liquor and lime from white liquor.

News Print Control May Be Only Temporary

Mills In Maritime Provinces and British Columbia Reported to be Determined To Secure Production Up to 100 Per Cent of Capacity—Are Not Parties to Agreement On Output and Prices—Rumored Pending Mergers May Save Situation, If Effected

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., May 7, 1929.—Canadian newspaper publishers, acting in conjunction and co-operation with American newspaper publishers, are watching very closely the operations of the recent agreement arrived at between the Canadian news print manufacturers for regulating the output and price of news print, and already it is apparent that further interesting developments may result within the next few months.

Right or wrongly, the impression appears to be growing among Canadian publishers that the agreement may prove to be only of a temporary character. In the first place, there appears to be no certainty that all the publishers are being treated on an equal basis as regards net price, when rebates are taken into consideration, and furthermore it is being held that Canadian publishers are being asked as a whole to pay a higher price than is being charged as a whole to American publishers. The price quoted to Canadian newspapers, it is said, is on the basis of a return of a net of $57 per ton to the mills, whereas the prices to American publishers return a net of $55 per ton to the mills. If this difference can be proven, it is possible that the Canadian publishers may object on the ground of discrimination.

Then again it appears that certain mills, and notably those in British Columbia and the Maritime Provinces, are not parties to the agreement for control of output and price, as administered for the majority of the mills in Quebec and Ontario by the newly-formed Canadian Newsprint Institute, of Montreal. These mills are said to be determined to push their sales with a view to securing an output up to 100 per cent of capacity, and to that end are said to be quoting prices which will net less than $55 per ton.

Various publishers in Canada are entering into contracts, or are being offered contracts, for news print, the length of the proposed contracts varying according to circumstances. In view of the fact, however, that consumption is between 20 and 30 per cent below capacity, and in view of the fact that the price of news print is fixed, anyway, there is a disposition to question the value of contracts.

The Matter of Rebates

One consideration that is being offered, at least by some of the mills, is in the matter of rebates. Publishers are being offered rebates on prices paid during the past three, six, or twelve months, to make those prices conform with the price now prevailing. It is difficult to ascertain whether this is a general practice, but it is certain that such rebates are being held out as an inducement for contracts.

As against this there are clauses in the proposed contracts which publishers do not like. One is that the prices quoted include freight for paper deliveries f. o. b. destination, destination meaning the railway station and not the publishers plant. Then again freight is made "collect," which means that publishers have to pay cash on delivery, and they question why they should finance the mills to this extent when the terms are 30, 60, or 90 days, as the case may be, for the paper itself.

Another clause to which they object is that taking from the publishers the right to name the mill from which they will receive the paper. This, of course, is made necessary by the pooling agreement with respect to orders, by which all mills are to operate in the same ratio to capacity. Publishers say that their machine men get used to a certain paper's color, ink absorption and tensile strength, and that if they are suddenly switched to paper from another mill it may result in much confusion, delay, and wastage of paper before the machine men get used to the new product.

Some publishers have absolutely refused to agree to this, and the mills they have been dealing with have as a result, not insisted on this clause. If this disregard of the clause is prevalent to any extent, it is questionable as to how some mills can be kept from producing above the average rate. As the manufacturers' agreement is said to specify a fine of $20 per ton for any mill producing above the ratio agreed upon there is a possibility that the publishers may force awkward developments.

Over and above this, there is evidence of strong competing efforts on the part of salesmen for the different mills, with attempts to switch orders to competing plants.

In other words, while on the surface the agreement between the manufacturers has steadied the situation for the time being and shown outward signs of co-operation, wherever one gets a peep behind the scenes there is evidence that competition is as strong and active as ever. How the situation will work out not even the wisest can venture to predict.

The Canadian market only absorbs about 8 per cent of the Canadian production, but if the position between the manufacturers and the publishers in Canada is any index of the general situation, then the situation is that the publishers are fully aware that the present is a buyers' and not a sellers' market, and are disposed to take full advantage of the fact. The whole question hinges on whether or not the Canadian Newsprint Institute is strong enough, and moral enough within its own membership, to force recognition among consumers of the agreement they have arrived at as producers. That, it is recognized, is a difficult and delicate problem, and the next few months will probably reveal the strength or the weakness of that organization.

Meanwhile a different aspect may be given to the situation if the rumors of huge pending mergers in the news print industry prove to be true.

Price Bros.' Profits Reduced

The annual report of Price Bros. & Co., of Quebec, for the year ending February 28 last, show earnings equal to 2.14 per cent on the common stock, as compared with 2.88 per cent in the preceding year. In the light of conditions which prevailed in the news print industry in the year under review, the statement is considered highly satisfactory.

Operating profit for the year amounted to $3,413,714, as compared with $4,079,574 in the preceding year. After allowing for interest and depreciation, net earnings were $1,367,420, as against $1,682,809 in the preceding year. Preferred dividends amounted to $450,664 and common dividends to $853,664, the surplus carried forward being $63,092, as against $374,145 as in the preceding year.

John H. Price, the president, in his remarks to shareholders, speaks cheerfully of the future, remarking that "the Canadian news print manufacturers have now succeeded in arriving at certain mutual agreements which we feel confident will assist materially in stabilizing the industry as a whole." He added:

"The construction work at your company's mill at Riverbend is nearing completion.

"The general condition of the physical assets of your company has, as heretofore, been well maintained.

"The returns from the lumber branch of the business have again proven satisfactory, while practically no stock remains on hand.

"During the year under report the news print market has reflected the condition where demand has not kept up with supply, resulting in curtailment of output and consequent tendency to increase costs."

It should be noted that the company has a substantial investment interest. The Aluminum Company of America, when it acquired the Chute a Caron property on the Saguenay, transferred to Price Brothers, as part owners, $4,000,000 of 6 per cent preferred stock of Aluminum Company of America and 36,800 shares of common stock. The common stock, it is understood, has been retained, and today is worth approximately $7,728,000. The Aluminum Company later distributed one share of Aluminum Company of Canada to its shareholders for each 3 shares of Aluminum Company of America. Price Brothers in this way received 12,250 shares of Aluminum Company of Canada, worth today approximately $1,400,000. In addition Price Brothers have a substantial interest in the Duke-Price Company which now has an installed development of 350,000 h.p. on the Saguenay river, from which Price Brothers receive 150,000 h. p.

Foresters Preparing for Spring Boom

Anticipating an unprecedent demand during the next six weeks for advice as to where, when, and how to plant forest trees and the species of trees to use, the Extension Department of the New York State College of Forestry at Syracuse University has arranged for service to prospective tree planters on a larger scale than heretofore.

The College will not only be prepared to answer the common questions that naturally occur to every new tree planter, but where requested and if possible, will examine the land upon which reforestation is to be done and recommend the kind of trees to plant on the location. The foresters of the Extension Department who are engaged in this work the year round believe that 1929 will break all records in tree planting in New York State.

Reforestation is on the threshold of a big movement which has been gaining headway during the last decade and which has been recently stimulated by the passage of the new Hewitt Commission reforestation laws. These laws provide for setting up a gigantic project of reforestation by the counties and state and will create an unprecedented demand for trees and forestry information.

Communications addressed to the Director of Forest Extension, New York State College of Forestry at Syracuse will bring complete information by mail or be followed by personal field examination where necessary and when men are available.

St. Regis Officials Return

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., May 4, 1929.—The offices of Corwin T. Jewell, general manager of the St. Regis Paper Company, have been moved from the Trust Building to the place formerly occupied by the purchasing department of the company which was recently transferred to New York City. The accounting department will be moved to another section in the same building and the quarters formerly occupied by the department will be abandoned. Mr. Jewell, accompanied by his wife and family, has just returned after spending three months at Daytona Beach, Fla. He is much improved in health and is already back to his duties. While in the South the Jewell family motored to many places of interest in Florida and a general good time was observed.

The next Interstate Commerce Commission hearing in the general news print investigation will be conducted at Minneapolis, Minn., starting May 16, according to information received by Joseph A. Quinlan, traffic manager of the St. Regis Company, and its associated concerns, who returned on Wednesday from Florida where he attended another hearing in the same case. The last of the hearings will be held in New England. The general investigation being conducted includes all rates on newsprint in territory east of the Mississippi River.

Bill To Aid Paper Made from Waste Crops

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 8, 1929.—Representative Goodwin has introduced a bill in the House providing for a fund of $20,000,000 to be loaned to certain organizations having to do with the manufacture of paper pulp from waste crops. The bill, which has been referred to the House Committee on Agriculture, is as follows:

Authorizing an appropriation to encourage the utilization of farm waste for the production of paper by aiding farmers and local chambers of commerce to develop the manufacture of paper pulp from waste crops.

WHEREAS it has been necessary for a number of years past in order to supply our national demand for various kinds of paper to import annually into this country approximately two million tons, either in the form of finished product or in pulp; and

WHEREAS, owing to the constantly diminishing supply of spruce and hemlock in this country and the increasing demand for paper each year, this amount of import will soon greatly exceed the present figure; and

WHEREAS each year this country raises but does not utilize more than enough waste farm crops to produce this paper; and

WHEREAS the utilization of these farm wastes would mean many millions of dollars to the farmers of this country: Now, therefore

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sum is hereby authoried to be appropriated by the Secretary of the Treasury for the purpose hereinafter specified:

That the sum of $20,000,000 be loaned in amounts not to exceed $100,000 each at 4 per centum interest, for a period of twenty years to certain organizations of local chambers of commerce and farmers under the following conditions:

First. Whenever within a territory comprising nine hundred square miles, in which there is annually a production of fifty thousand tons or more of such waste field crops as cornstalks, cotton stalks, tobacco stems, straws of all kinds, or sugar-cane pulp, and when in such territory a sufficient number of farmers, in written contract, shall bind themselves together to deliver to any selected site fifty thousand tons or more of these waste crops yearly for a period of five years or more, with the express desire of producing pulp for paper making under the direction of a committee of business men appointed by the local chamber of commerce or commercial club, such action shall constitute the organization of local chambers of commerce and farmers above referred to, and this organization so formed and incorporated shall be entitled to the benefits under this Act.

Second. This organization shall agree to erect a pulp mill containing such machinery as it has been demonstrated at the Iowa Agricultural College at Ames, Iowa, in conjunction with the Federal Government will produce pulp for paper, and for the purpose of erecting such a mill and putting it into operation the Treasurer of the United States shall loan such organization not to exceed $100,000 at 4 per centum interest for the term specified above.

Third. The Secretary of the Treasury is hereby authorized to make such investigations and rules as are necessary to put this Act into effect.

Foremen's Improvement Club Dines

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., May 6, 1929.—Sutherland Paper Company of the Foremen's Improvement Club of the Bryant division, Bryant Paper Company, was held Thursday evening in the company's administration building. A rabbit dinner was served and was followed by music by the Parchment School Ukulele Club. Talks were given by Felix Pagenstecher, president; F. N. Stevens, vice president; C. A. Fox, secretary-treasurer; G. N. Collins, production manager and Otto Fischer, superintendent of the Bryant division. C. E. Torrence, director of personnel, acted as toastmaster.

Ontario Paper Mills Exceptionally Active

Outlook For Spring Business Excellent For Practically All Grades of Paper — Fine Paper Plants Very Busy, With Some Producers Several Weeks Behind With Orders—Board Mills Slowed Up Somewhat, But Paper Box Industry Continues to Thrive

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, May 6, 1929.—April produced a satisfactory volume of business for Ontario paper distributing houses, sales in practically every section surpassing those of the same month last year. While orders individually continue to be of the small variety there are enough of them going to bulk up well each month and the wholesale paper trade generally may be said to be in a prosperous condition. This is a reflection of good business conditions generally throughout the provinces where practically all branches of trade are active. The printing trade is in good shape and the larger printing and lithographing establishments are making fairly large requisitions for paper. Books, bonds, ledgers, and in fact all classes of fine papers are selling well and in many standard lines of fine papers mills are behind with their shipments to wholesalers.

The manufacturing end of the paper trade, for the most part, is remarkably active, with the possible exception of the board mills and some sections of the coarse paper industry. Mills manufacturing fine papers are having all they can do to make deliveries promptly and a few of them are several weeks behind with their orders. With prosperous conditions generally existing throughout Ontario, a big volume of advertising is being put out and this has reacted favorably on the consumption of paper, particularly of book and coated lines. Coated paper manufacturers report a satisfactory volume of trade now as replacing the rather quiet conditions which have prevailed late in the winter months. They say the outlook for spring business is excellent and this applies to all classes of fine papers.

The coarse paper market is hardly as active as the trade would like to see but there is a disposition to buy in greater volume just now and by the time spring is advanced wrapping and paper bags should show up well in sales volume. Kraft is in good demand throughout all of Canada and for export as well and prices are holding firm in this as in other lines. Mills manufacturing onion skin, glassine, greaseproof and waxing papers are doing a good business while there is a good demand for all lines of tissues and light weight papers generally. The paper converting trade is gradually increasing its output although orders for future delivery are greater than those for current account. Board mills have slowed up somewhat, but the paper box industry continues to thrive.

More Pulpwood Grants Are Sought

The Manitoba Paper Company, of Winnipeg, claims to have obtained less than 3,000,000 cords of pulpwood from the reserves area set aside for them and are applying for further grants of pulpwood. This statement was made by the Hon. Charles Stewart, Minister of the Interior, at Ottawa, in discussing the pulpwood situation in Manitoba. While declining to express any opinion as to the accuracy of the statement of the company, Mr. Stewart expressed disappointment at the results of the pulpwood survey carried out last year in the northerly sections of the province outside the area reserved for the paper company. This survey, he said, showed that there was not more than 2,000,000 cords of wood in the Nelson River and Saskatchewan River area, which would be insufficient to warrant the establishment of a second pulp and paper mill in the Province.

The survey of the department in the Davidson concession in the eastern and central section of Manitoba had disclosed much larger pulpwood resources than had been expected. There are 700,000 cords of pulpwood in the concession, according to the report of the engineers, and Mr. Stewart said that he would consult with Premier Bracken in regard to the disposition of this wood. It was his opinion that these 700,000 cords should be reserved for the Manitoba Paper Company to help to bring their total wood supply closer to the 6,000,000 cords desired. However, the wood, he thought, should not be handed over to them but should be leased in small blocks to settlers who desired to cut it. The paper company should be made, by agreement, to pay the going price for pulpwood.

To Supervise Forest Preserves

The Provincial Forests Act introduced during the last session by Hon. William Finlayson, Minister of Lands and Forests, and approved by the Ontario Legislature, bore further fruit this week when Premier Ferguson and Mr. Finlayson announced the appointment of J. Frank Sharpe to the post of forester in charge of provincial forests. The announcement was made following a cabinet council meeting. Mr. Sharpe has been connected with the department ever since his graduation from the University of Toronto in 1922. During the majority of that time he has been chief of the estimates and surveys branch. Prior to his graduation he served during his period of study with various pulp and paper companies and is considered an authority on the work which he is about to undertake. The act provides for the establishment of eight provincial forests throughout the province totalling an area of approximately 25,000 square miles. On these will be adopted the latest reforestation and perpetual yield methods in an effort to solve the problem of forest depletion. Each forest will be under a local forester and Mr. Sharpe will be in charge of all the work with his head office in Toronto. He is a native Canadian having lived most of his life in Toronto, and is the son of Canadian-born parents.

To Handle Mulch Paper in Toronto

Paper Sales, Ltd., King street West, Toronto, have been appointed Canadian distributors of Keystone Mulch Paper, manufactured by the Keystone Mulch Paper Company, Philadelphia. The line, which is somewhat new to Canada, is designed to protect growth of vegetables and fruit, producing better yields, earlier yields, retention of fertilization, and prevention of destruction of crops by mice and cutworms. The paper is especially prepared, with asphaltum center, and contains the proper ingredients to retain soil moisture and increase crop yield. While the paper is in use in the United States and other countries, it has not yet been utilized in Canada, although it is believed that there is a good field for it in the fruit districts of the Niagara Peninsula, where an effort will be made to introduce it by Paper Sales, Ltd.

Large Scale Rescue Work for Forests

From the air, and on a greater scale than ever attempted previously by any other nation, Canada will fight the insect scourge of the nation's forests this summer. About twenty miles west of Sudbury, Ont., and in the Muskoka region, two separate fights against the plague which has left stricken thousands of acres of pulpwood forests, will be undertaken in the middle of June. Definite plans for the work were announced by the Entomological Branch of the Department of Agriculture at Ottawa this week. The magnitude of the work to be undertaken is best indicated by the staggering figures which represent the loss to Canada through insect ravages in the forests during the past few years. Since 1909, according to statistics, 200,000,000 cords of balsam fir have been destroyed by the insect known to science as the budworm. That supply would have fed the pulp and paper mills of the country for 50 years. This summer the airplanes which are being put into commission in the Sudbury and Muskoka districts, will "dust"

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with poison hundreds of square miles of balsam and hemlock forest. The Dominion Air Service, the Provincial Branch of Ontario and the Dominion Entomological Branch are co-operating. The Dominion experts will be on the ground where operations are in progress. The Ontario and Dominion Governments have each purchased a specially equipped plane for the work. Both of these are powerful tri-motor machines, capable of covering large areas in their flights. At the controls of these machines will be expert aviators, while at the field headquarters will be staffs of mechanicians and research workers studying detail of results and every phase of the operations.

Hinde & Dauch Extension Program

The expansion program of the Hinde & Dauch Paper Company, board manufacturers, Toronto, which includes the erection of a new mill of brick and steel construction, five stories high, will be completed by June 15, according to a progress report issued at the beginning of May. The extension to the Toronto plant involves an outlay of approximately $1,500,000, and will include the installation of additional equipment which will give it a daily capacity of 150 tons per day. Operations in the Toronto, Trenton, and Montreal plants have been on an increased scale during the past year, according to O. H. Moore, managing director, and it is expected that the financial statement for the year ended December 31, 1928, which will be available shortly, will reflect the growing production.

Substantial additions to plant facilities are in progress, and a program of further expansion was intimated. The company is the largest manufacturer in Canada of fiber shipping boxes and corrugated paper products, and is also the largest producer of straw board for corrugating purposes. Hinde & Dauch in 1928 acquired all the assets of the Thompson & Norris Company, of Canada, with plants at Toronto and Montreal, and last year a new plant was opened in Trenton for the manufacture of straw paper for corrugating, with an initial capacity of 35 tons a day. This output has since been increased to 75 tons daily. Mr. Moore also announced that as soon as building operations in Toronto and Montreal have been finished, it is the intention of the company to build plants at Winnipeg and Vancouver to provide for the rapidly growing business in Western Canada. These improvements in manufacturing facilities will place the Hinde & Dauch Paper Company of Canada, Ltd., in a foremost position among the plants of Canada and the United States for the manufacture of corrugated and fiber-board boxes. The production program also calls for substantial reduction in costs, which undoubtedly will be reflected in the earnings of the company.

General News of the Industry

C. J. Kay, of the Columbia Paper Company, Ltd., Vancouver, B. C., was a business visitor in Toronto while on his way back from a visit to the British Isles.

No. 2, vol. 1, of "Presenting Printing," a publication put out by Provincial Papers, Ltd., head office Toronto, is off the press. It contains samples of illustrated work done on the company's Oxford Super Book and demonstrates the fine printing quality of that paper, which has a coast to coast distribution.

Howard Smith Paper Mills are now producing a new paper—Huronic Cover. It is made in Velvet, Land, and Roughcast finishes, and in Mist Grey, Fern, Green, Tepee Brown, Sunset Gold, Horizon Blue, Parchment Ivory, Snowdrift White and Chieftain Scarlet. The dutch edge runs the long way of the sheet and the velvet finish is made in double-thick weight.

Alliance Paper Mills, Ltd., Toronto, has just issued a most artistically designed and beautifully illustrated folder, printed on its Luxa-coated porcelain book paper on a standard cylinder press. The result is evident of a most satisfactory kind as to what may be expected from a combination of the finish, color and body of this paper with good half-tones, good inks, and careful workmanship. The folder has an outer covering of Alliance herringbone glassine.

Although the news print depression is causing many companies to go slowly on the ordering of new machinery, the Dominion Engineering Company's works are keeping up a high level of operation on orders for news print machines. The company acquired the Walmsley Company of Canada, and through that company has acquired orders for two news print machines from the Mersey River Pulp and Paper Co.'s new mill in Nova Scotia. The company is also completing machinery for the International Paper Company's new mill in New Brunswick, including two news print machines. Two other machines of a similar type are being built for the projected news print mill of the McLaren interests at Buckingham, Que.

The pulpwood harvest at Pass Lake, Ont., is finished. The homesteaders cut about 4,500 cords of pulpwood and of this amount about 3,500 cords are on Portage Creek to be floated.

The head office of the Canadian Barking Drum Company has been removed from 1601 Royal Bank Building, Toronto, to 607 Drummond Building, Montreal. W. W. Cole, of Peterborough, Ont., who was appointed manager of the company, is taking up his residence in Montreal and reports that business with the paper mills is very active just now.

J. B. Larkin, of the Howard Smith Paper Mills, Montreal, was a business visitor to Toronto this week.

Copp-Clark, Ltd., having moved to their new buildings on Wellington street, the United Paper Mills, Ltd., have taken over the space in the Spadina Building thus vacated. The paper company now have three entire floors in the building, having taken an additional 10,000 square feet of space, making a total of 30,000 square feet which they now occupy in the Spadina Building.

A visitor to Toronto this week was E. A. Schofield, president of the Schofield Paper Company, Ltd., St. John, N. B., and a past president of the Canadian Pulp and Paper Association. Mr. Schofield was on his way back home after a visit to Los Angeles and other California centers.

Requests for reservations through the secretary's office in Toronto of the Canadian Paper Box Manufacturers' Association indicate that over 500 delegates and friends will be in attendance at the annual convention of the organization in Toronto opening on May 15, and that of the National Association which also holds its annual meeting at the same time. Elaborate preparations have been made by the Toronto association in the way of entertainment and arrangements for the business sessions and a record-breaking convention is looked for.

Recent advices from Fort William say that the second paper machine of the Great Lakes Paper Company, which is 304 inches wide, and having an ultimate output of 210 tons daily, is now producing at the rate of 150 tons or more. The installation of this machine completes the program, the first machine having been operating during the past year. A large part of the output from this machine will go to the *New York Times*, which for many years up to the end of 1928 was being supplied by two machines of Laurentide. The additional capacity at Fort William is being added to the present total rating for all Canada of 10,018 tons daily will tend to cut down slightly the ratio of production to capacity for the Canadian industry from May on, but it is expected that this increase and several others still to be added this year will be absorbed by increases in consumption and allow the present ratio of well over 80 per cent. to be maintained.

Paper Mill Employment

The Bureau of Labor Statistics, Department of Labor, at Washington, D. C., received reports from 217 paper and pulp mills which gave their February employment at 60,480 increasing in March to 60,504, an increase of less than one tenth of one per cent. The payrolls in these mills, however, decreased from $1,675,505 in February to $1,673,749 in March a decrease of 0.1 per cent.

Reports were also received by the Bureau from 185 paper box factories which gave their February employment at 19,549 decreasing in March to 19,548 a decrease of less than one tenth of one per cent. The payrolls in these factories, however, increased from $448,016 in February to $457,664 in March an increase of 2.2 per cent.

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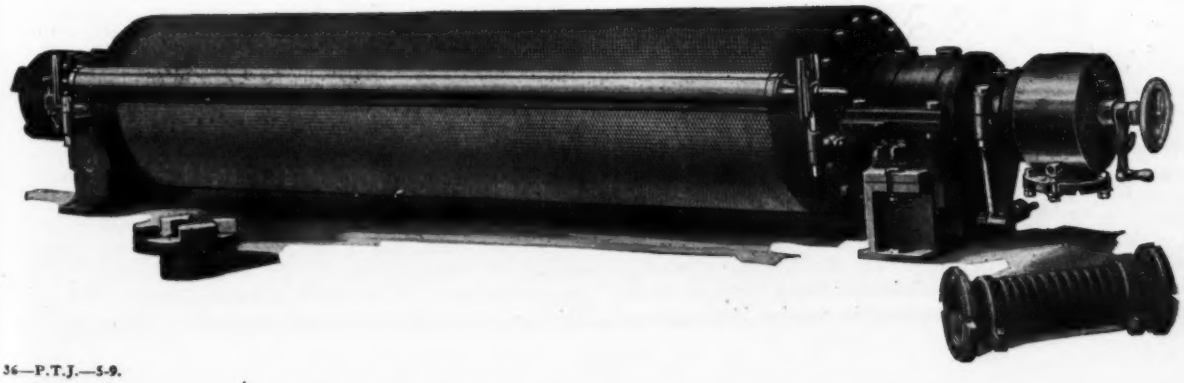


Demand For Paper Less Active In Chicago

Various Grades of Coarse Paper Only In Moderate Request, According to Reliable Reports—Mill Representatives Blame Over-Production For Detrimental Effect On Kraft Paper Industry—Fine Paper Market Exhibits Strong Undertone

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., May 6, 1929.—There is still inactivity in the paper markets in and around Chicago. Krafts are reported to be considerably slowed up in demand and the same is true of other grades of coarse paper. Practically all the blame for slackened business in these grades is being placed on over-production Chicago mill representatives state that, in most cases, from 20 to 25 per cent over-production and even more in some cases, is having a detrimental effect that should, eventually, right itself. In the mean time the second quarter of the year is not expected to be overly good in these grades. Fine papers, including practically all of the higher priced papers used in fine printing work, are in excellent request. Coated papers are reported markedly improved. Board is still off as to price, according to statements made today. The demand, however, runs fairly good. News print seems to have settled down now and should be favorable if left to its own.

Chicago Paper Association to Meet

The next meeting of the Chicago Paper Association will be held on Tuesday evening, May 14, according to word received from Leo Altholz, of the Inlander-Steindler Paper Company, president of the association. The May 14 meeting will be unusual in that it will introduce the new system of the association which provides for two distinctly separte group meetings, one discussing the problems of the members selling to the retail and miscellaneous trade and the other group going over the difficulties of members selling to the industrial trade. It has long been the opinion of the association's executives that the problems of these two groups, while alike in some particulars, are of a sufficiently different nature to permit individual discussion. Accordingly, D. F. Peck, vice president, and Earl Beier, newly elected vice president will preside, each over his respective group to give members a chance to stick closely to facts relative to their own trade channels. The organization, as a complete unit, will continue to work in perfect harmony in an effort to further build up the coarse paper market in this vicinity—a purpose which they have already gone far in fulfilling.

Paper Board Men to Confer

Advance information on the coming meeting of the Paperboard Industries Association which will be held at the Palmer House, Chicago, on Wednesday, May 22 and Thursday, May 23, indicates an unusually large attendance and the possibility of the bringing up of a number of important matters of special interest to the large membership. Although the complete schedule of meetings has not yet been made public, members are practically assured, from past performances, that meetings of the Folding Box, Container and Paperboard groups, will be held separately throughout the two-day meeting with a joint meeting of all groups, probably on the last day of the sessions. An executive and committee meeting will, in all probability, be held on Tuesday, May 21, at the Palmer House.

Kately to Address Paper Salesmen

The program committee of the Chicago Division of the Salesmen's Association of the Paper Industry is all set for an enthusiastic meeting on Monday, May 6, when Mr. Kately, printing expert of R. R. Donnelly Company will talk on printing from the viewpoint of the salesmen, giving an interesting discussion based on the salesman's viewpoint. The Monday, May 13 meeting will bring Ed. Schaffer of the Mississquoy Paper Company to talk on bristols and, incidentally, to turn the meeting into a general discussion in which all may take part. Plenty of interest is being aroused over the first of the year's golf events to be held over the sporty Glencoe course, Thursday, May 23.

News of the Trade

H. W. Suter of the Champion Coated Paper Company, Hamilton, Ohio, visited in Chicago for a number of days during the past week.

One of Chicago's well known envelope manufacturers, the Outlook Envelope Company, has recently moved from 564 West Monroe street, Chicago, to 1001 West Washington street, according to F. M. Callahan, president of the progressive organization. The floor space of the new location is reported to be practically the same as that of the old—slightly more than 10,000 square feet.

Included in the attractive literature representing Chicago paper houses and now on the desks of printing and advertising firms in this city are two excellent examples of effective mailings, one by the Paper Mills Company and the other by the James White Paper Company.

The Paper Mills Company has issued a number of samples of coated paper, illustrating the manner in which large pictures in colors may be printed thereon.

From the James White Company comes a portfolio of popular booklet sizes—valuable suggestions—comprising eight booklet dummies made for various kinds of cover and books. The portfolio includes the suggestion that all of the dummies represented may be cut from stock without waste, all fitting standard sizes of stock envelopes and the entire group of standard filing enclosure or pocket size.

J. B. Jones, of the Western Newspaper Union, Omaha, Nebraska, was a visitor to Chicago during the past week.

Alexander Thomson, of the Champion Coated Paper Company visited the city for a few days.

Paper Board Men To Meet May 22-23

The paper Board Industries Association and the Trade Practice Division of the Association will meet in the Palmer House, Chicago, May 22-23.

"We cannot impress upon you too strongly," says the secretary of the association, "the desirability of every company in the industry being represented at these meetings.

"All manufacturers of paperboard, containers and folding boxes are invited to attend the respective Group meetings, the Mass Meeting of the Industry on Thursday morning, May 23 and the General Association Meeting on Thursday afternoon, May 23. You are also invited to attend the luncheon at 12:30 noon, Thursday, May 23.

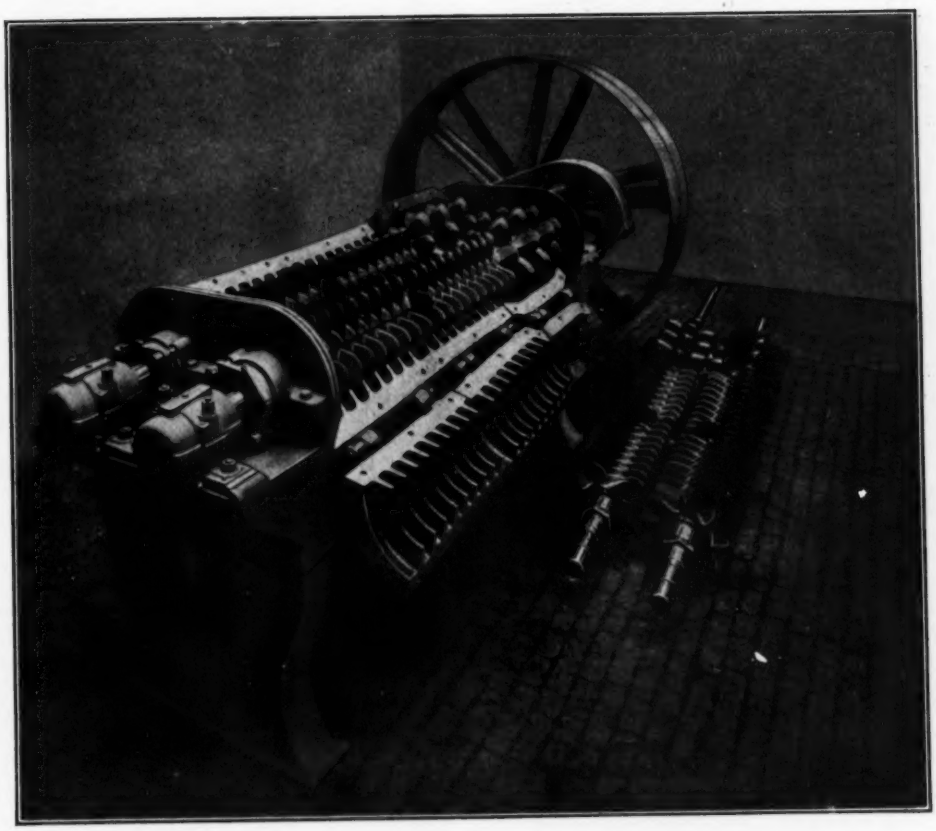
"Every reputable manufacturer of paperboard, containers and folding boxes is invited to participate in the trade practice activity, the purpose of which is to raise the industry to the proper plane. This can best be done through membership in the Association. If you are not already a member, it is suggested that you fill in and return the enclosed application blank, so that your application may be submitted to the executive Committee in advance of the meeting. In any event, you should attend meetings."

Pacific Mills Make Big Shipments

LONGVIEW, Wash., May 3, 1929.—The Longview Fiber Company, shipped 600 tons of paper by the American-Hawaiian steamer Missourian, April 23, the cargo going to Atlantic coast points. This boat carried 500 tons of pulp from mills at Hoquiam, Wash.

The most efficient machine for repulping broke:

A Voith Kneader



and why:—

By repulping their broke in a Voith Kneader instead of working it up in the broke beaters, a well known bond mill is effecting a *saving in power alone of some 160 H.P.* Labor costs have also become smaller and what is more important still, the Voith Kneader makes it possible to have a *uniform furnish for each beater,* doing away with the variations which always occur in the chest when dropping a broke beater.

For full particulars apply to

American Voith Contact Company, Inc.

280 MADISON AVE. **NEW YORK**

Pennsylvania Fine Paper Mills More Active

Manufacturers Now Operating On Broader Schedule of Production, Due to Greater Demand for Wrapping Paper—Producers Continue Moderately Busy With Orders Booked During Past Three or Four Weeks—Incoming Business Calls For Less Tonnage

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., May 6, 1929.—Wholesale paper merchants and mill representatives found in the past week a fairly gratifying demand for paper among the larger consumers of certain grades that ordinarily are purchased under contract. It may be that the usual renewal of contracts with the expiration of the first quarter of the year was responsible for this upward swing in the wholesale market, for the brisker demand did not extend to the general distributive markets.

Paper manufacturers in the local territory report that there is greater demand for their products. This is particularly true of the fine paper mills, which have been less busy than the producers of specialties and wrapping grades. While there is no great boom, the manufacturers have placed their plants on a broader schedule. Roofing makers are forging ahead on full time basis. Builders boards, too, are active.

Wrapping paper producers are fairly occupied with purchases that were made some three or four weeks back, but incoming orders show lesser tonnage requirements. Producers of the better grades of fancy bags have a good advance business especially for the many novelties in glassines and cellophane and their combinations, which are popular because of their visibility of contents and usefulness as protective covering. There has been an unusually brisk demand for these cellophane bags among Philadelphia manufacturers, who have been the pioneers in these products in the paper industry. Keen competition among the local independent bag manufacturers has been less productive of profits, as prices are made so low that they do not warrant the time given to their production.

While paper stocks lag in a listless market, with but a very few grades in demand because of their scarcity, the rag market shows improvement. Shavings, book and ledger stocks continue to be bought by the manufacturers, but as few of these are available, the market is limited. The rag market has firmed. Roofing manufacturers are consuming heavy supplies and fiber and fine paper mills are more frequent purchasers of the better grades of new rags. Prices, however, remain unchanged on both paper and rag stocks.

Farewell Banquet for Morgan H. Thomas

Officials and sales representatives of the Garrett-Buchanan Company joined in the farewell banquet held last Monday evening in honor of President Morgan H. Thomas, of the Garrett-Buchanan Company, at the Arcadia Cafe in the Widener Building. The banquet was climaxed by a theater party at the Forrest Theatre when the diners adjourned to enjoy the show, "A Night in Venice." The banquet was scheduled on the eve of the departure of Mr. Thomas for a prolonged trip abroad, when he and Mrs. Thomas and their son Ellwood Thomas, an associate in the firm, will tour southern Europe. President Thomas gave a brief word of appreciation of the honor bestowed by his associates in the business and then presented each with a fine Stetson Hat. He sailed on May 4 on the *Vulcania*.

Schwartz & Co. Expand

With the complete installation of the offices and warehouses of Schwartz & Co., Inc., in its new home at 151 North 3rd street, plans have been perfected for extension of the business. The firm has provided for the addition of several new lines of paper which will be carried in the new five story building which it recently leased under long term for the expansion of business. The head of the firm, Samuel Schwartz, who has been in the paper trade for more than fifteen years, has added blottings, sanitary products, such as drinking cups, towels, napkins and other allied grades and an assortment of stationery supplies. These lines are entirely new grades of paper to be carried and stocked to augment the wrapping papers, bags, twines and specialties which originally were the chief supplies dealt in.

John Birle Jr. On Honeymoon Tour

John Birle, Jr., assistant manager of the American Forest Products Company, sailed last week with his bride on an indefinite honeymoon trip through Europe. The honeymoon followed his wedding last Thursday to Miss Mildred Donnelly, at the Roman Catholic Church of the Transfiguration. The young couple embarked on the S.S. *Augustus* at New York on Friday. The groom is the secretary of the Philadelphia Paper and Twine Merchants Association.

J. R. C. Masters On Wedding Trip

President John R. C. Masters, head of the paper converting concern of Clark & Co., Howard street and Montgomery avenue, sailed for Bermuda last Wednesday following his marriage in New York City on the preceding day to Miss Mary Clarissa White, a society deb, and daughter of John Beaver White, of Stoke Poges Lodge, Villanova. Mr. Masters is a graduate of the Princeton class of '27. The youthful couple will return to Philadelphia following a short sojourn in the Bermudas.

Wyoming Valley Paper Mills Close Warehouse

Having for the past year or more occupied a warehouse in the Bailey Building at 600 South Delaware avenue, as local stocking center, the Wyoming Valley Paper Mills, of New Hampshire, with headquarters at 5 Beekman street, New York, have discontinued the local distributive branch. The sales offices for the Philadelphia district have been consolidated with the New York headquarters where stocks are also carried and shipped to local dealers.

Progressive Paper Co. Expansions

The Progressive Paper Company, recently acquiring larger quarters at 134 North Delaware avenue, has made further extensions in its business since taking possession of the enlarged home near the waterfront. The firm is now stocking carload quantities of Crystal Tissues No. 1, in manila and fifteen pound weights. In addition to stocking tissues in wholesale lots the firm has added in recent days folding boxes, handling those made by the Stear Box Company, 18 West 18th street, New York. The line includes folding clothes and millinery boxes. Miss Miriam Clair, who is associated with her brothers in the business, leaves this week for an extended tour across the continent, stopping for a prolonged visit with her mother, Mrs. Minnie Waxman, in Seattle, Wash.

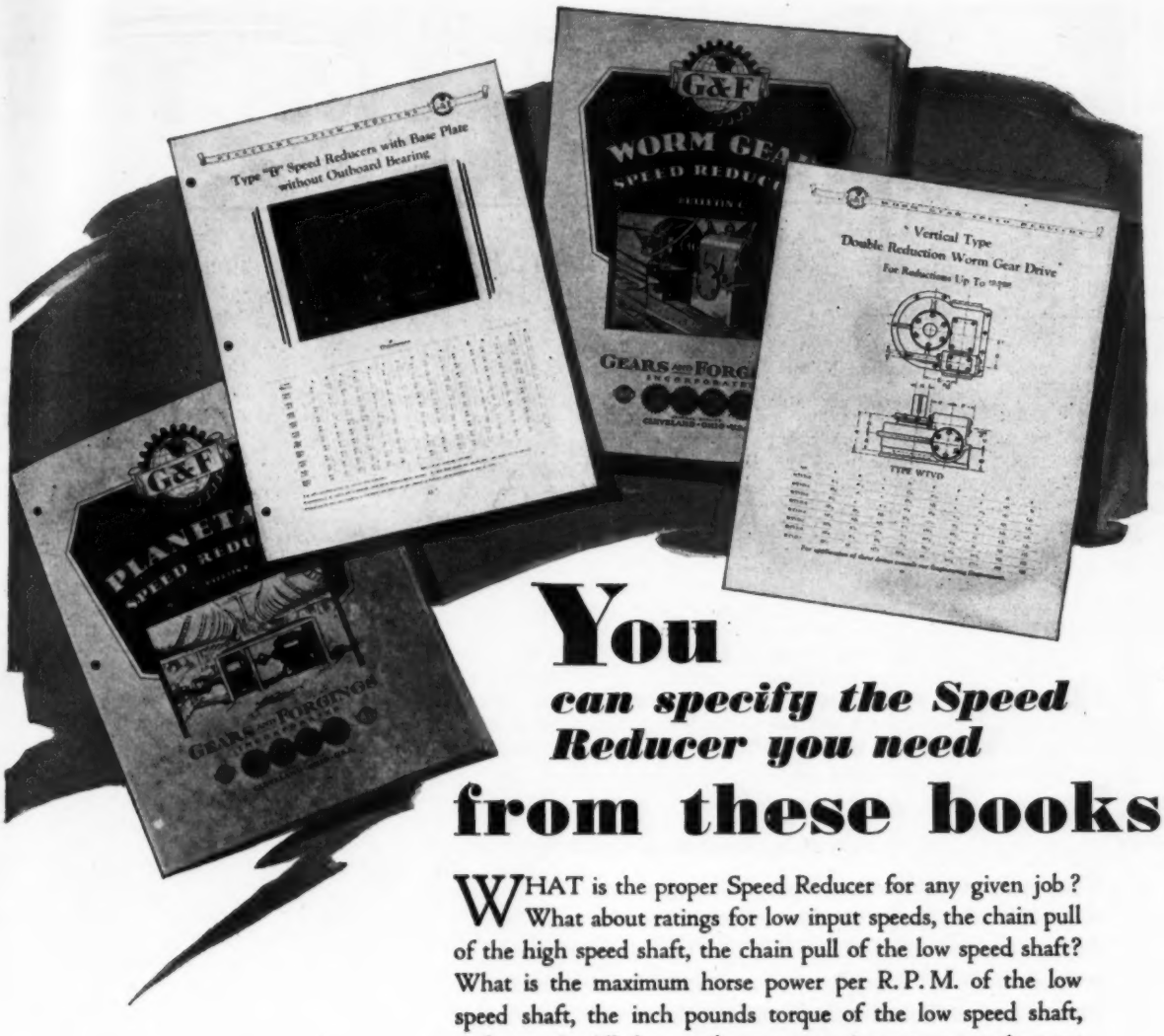
Harry J. Fleming Tours West

Harry J. Fleming, local representative for the die wiping papers of the Racquette River Paper Company, has left for a tour of the Great Lakes and Middle West Region, covering the consuming and distribution field in that section for the die wiping grades in which he specializes. He will remain west for the next few weeks.

To Be Superintendent At Harrisville

AUSTIN, Pa., May 7, 1929.—Elmer E. Staub, superintendent of the plant of the Bayless Manufacturing Corporation, is leaving June 1 to go with the St. Regis Paper Company as superintendent of the company's mill at Harrisville, N. Y

Mr. Staub has been with the Bayless Manufacturing Corporation for a number of years and as a token of the high esteem in which the employees held him, he was presented with a gold watch and chain.


Type "B" Speed Reducers with Base Plate without Outboard Bearing
WORM GEAR SPEED REDUCERS
Vertical Type
Double Reduction Worm Gear Drive
For Reductions Up To
TYPE WTVD
PLANETARY SPEED REDUCERS
GEARS AND FORGINGS

You
can specify the Speed Reducer you need
from these books

WHAT is the proper Speed Reducer for any given job? What about ratings for low input speeds, the chain pull of the high speed shaft, the chain pull of the low speed shaft? What is the maximum horse power per R. P. M. of the low speed shaft, the inch pounds torque of the low speed shaft, and so on? All these and many more important questions are fully answered in these two bulletins.

Invaluable information to designing engineers, production engineers and purchasing agents is contained in Bulletin B on Planetary and Bulletin C on Worm Gear Speed Reducers.

We will be glad to send on request one or both catalogues, depending on your requirements. Simply send us a post card or letter giving full name and title.

In addition, our Engineering Department is ready always to analyze your problems and submit a recommendation.

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Drop, Flat Hammer and Upset Forgings
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District Sales Offices: Chicago, Pittsburgh, Detroit, Buffalo, New York, Milwaukee

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Detroit, Mich.—The Detroit Paper Products Corporation, Domine street and line of Grand Trunk Railroad, has work in progress on an expansion and improvement program to double, approximately, the present capacity of the plant. A new unit is being completed and will be ready for occupancy at an early date; it is brick and steel type, and will be equipped for the manufacture of corrugated paper boxes, developing a gross capacity of about 2000 tons of such material per month for the mill. The new addition will give a total plant space of close to 2½ acres, and is said to represent an investment of more than $200,000. The company will also increase production of other corrugated paper goods, including interior packing, single face rolls, folders, pads, etc. S. H. Franklin is president.

Somerville, Mass.—The Agar Manufacturing Corporation, Somerville, has awarded a general contract to Chase & Gilbert, 250 Stuart street, Boston, Mass., for proposed new addition to corrugated paper box manufacturing plant on Warwick Place, near foot of Clyde street. It will be one-story, 50 x 260 feet, brick and steel type, estimated to cost more than $70,000, with equipment. A list of equipment to be installed will be arranged at an early date.

Rapid City, S. D.—The Midwest Paper and Supply Company is said to have plans under way for a new one-story building to be used for general storage and distributing service, reported to cost more than $20,000, with equipment. James Buell is president.

Menominee, Mich.—The Hoskin-Morainville Company, Sheridan Road, has begun work on a new addition to mill, recently referred to in these columns, to be one-story, brick, 50 x 100 feet, reported to cost close to $50,000, with equipment. It will be used for increased output. L. A. DeGuerre, Wisconsin Rapids, Wis., is paper mill engineer, in charge. R. W. S. Hoskin is president.

Richmond, Va.—The Standard Paper Manufacturing Company has awarded a general contract to the Allen J. Saville Company, Inc., Electric Building, Richmond, for the erection of the first unit of its proposed new additions, in connection with a general expansion program for large increase in present capacity and super-structure will be placed under way at an early date. The work will be carried out at Mill No. 3, which will be doubled in output. A new paper-making machine will be installed, with beaters and complete accessory equipment. The entire program is reported to cost more than $500,000, and will be carried out over a period of months. Lee, Smith & Van Dervoort, Sixth and Franklin streets, Richmond, are architects. J. F. Ryland is vice-president and general manager.

Williamsport, Pa.—The Hilsher Paper Box Company, recently organized by William H. Hilsher, 324 Union avenue, Williamsport, and associates, with capital of $50,000, will operate a local plant for the manufacture of paper boxes and containers as well as receptacles and kindred specialties. Mr. Hilsher will be president; Clifford E. Wentz, Jersey Shore, Pa., has been elected treasurer.

South Bend, Ind.—The John Baumgarth Company, 1219 Washington boulevard, Chicago, Ill., manufacturer of calendars and other paper stocks, has asked bids on general contract for the construction of a new plant at South Bend, consisting of two one-story and basement units, 300 x 380 feet, annd 85 x 200 feet, respectively; the first will be used as a factory, and the other structure for office service. The entire project is reported to cost more than $200,000, with equipment. It is understood that the company will remove Chicago plant to this location and concentrate production here with considerable increase in present output. Frank D. Chase, Inc., 720 North Michigan avenue, Chicago, is architect and engineer.

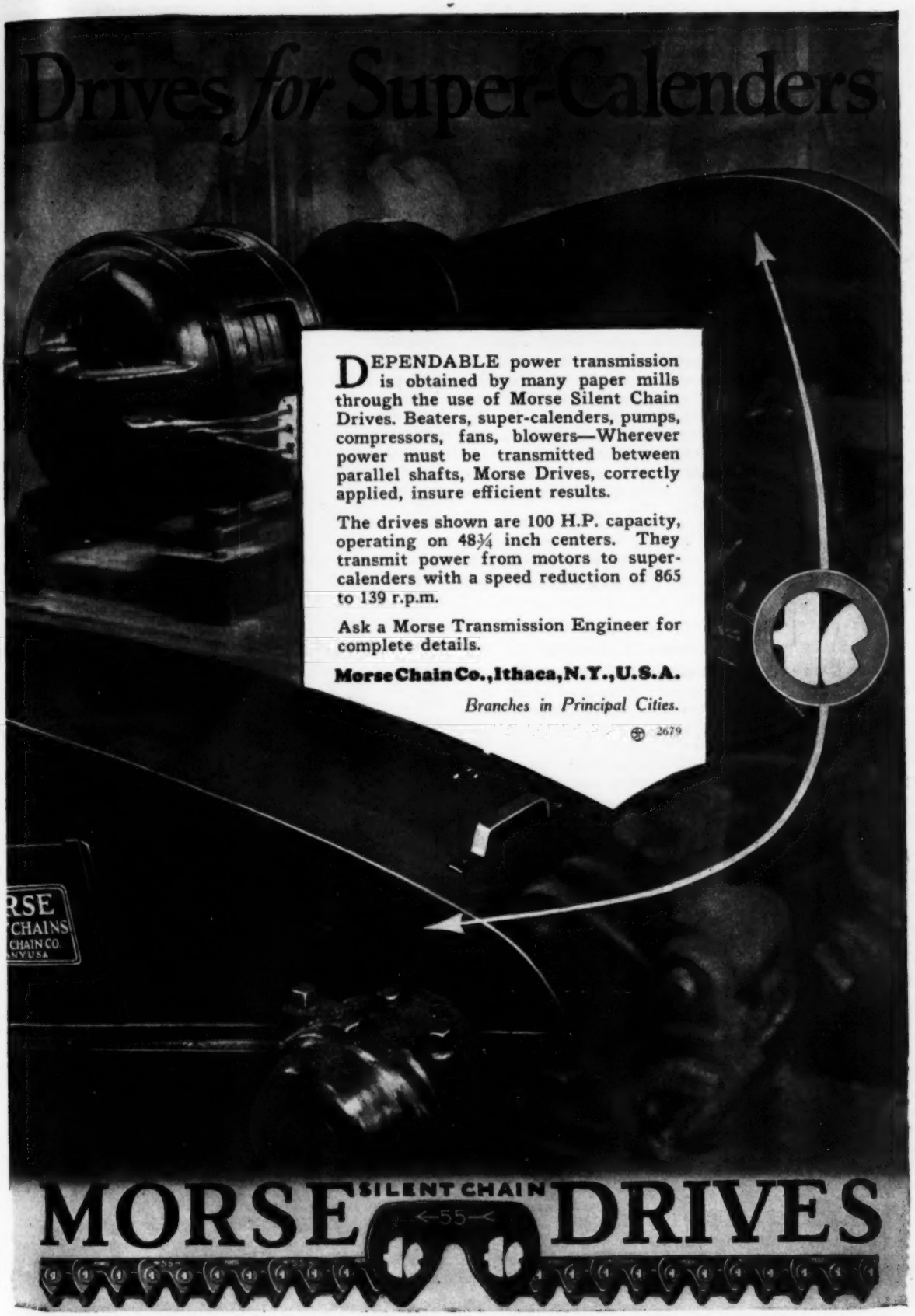
Detroit, Mich.—The Detroit Waxed Paper Company, 547 Harper street, has begun the construction of its proposed new plant on a six-acre tract of land at River Rouge, near Detroit, and will push the project to completion. A list of equipment to be installed will be arranged at an early date. The main unit will be one-story, 210 x 600 feet; entire project will cost approximately $600,000. H. E. Beyster, General Motors Building, Detroit, is architect and will supervise erection. H. M. Butzel is secretary.

Miami, Fla.—Charles H. Kors, Miami, is said to be at the head of a project to construct and operate a paper manufacturing plant in this vicinity, and has negotiations under way with the City Commission, Welton A. Snow, city manager, relative to desirable site to be secured under lease. The project is in a preliminary stage; it is understood that a company, headed by Mr. Kors will be organized in the near future.

Harrisburg, Pa.—The Harrisburg Paper Box Corporation is operating on a full capacity schedule giving employment to regular working force. The company is said to have booked business to insure present operations for a number of months to come.

Greensboro, N. C.—The Carolina Carton Company, recently referred to in these columns, will arrange to operate under the name of the Southeastern Carton Company, and has perfected plans for the immediate installation of a local plant for the manufacture of folding paper boxes and other paper containers. Initial equipment is estimated to cost close to $35,000, and contracts for a portion of this machinery have been let to the Thomas National Press Company, Franklin, Mass.; Babcock Press Manufacturing Company, New London, Conn.; and the Miller Saw Trimmer Company, Pittsburgh, Pa. The new organization is capitalized at $100,000, and is headed by William E. Beckwith, Greensboro.

Greenville, Miss.—The Greenville Insulating Board Corporation, a subsidiary of the Paepcke Corporation, 111 West Washington street, Chicago, Ill., has awarded a contract for structural steel framing for its proposed new local mill to the Ingalls Iron Works, Birmingham, Ala., and superstructure has been placed in progress. The company has also arranged a contract for electric power and natural gas for plant service with the Mississippi Power and Light Company, and facilities will soon be installed. The mill will secure raw material supplies from the neighboring


Drives for Super-Calenders
DEPENDABLE power transmission is obtained by many paper mills through the use of Morse Silent Chain Drives. Beaters, super-calenders, pumps, compressors, fans, blowers—Wherever power must be transmitted between parallel shafts, Morse Drives, correctly applied, insure efficient results.
The drives shown are 100 H.P. capacity, operating on 48¾ inch centers. They transmit power from motors to super-calenders with a speed reduction of 865 to 139 r.p.m.
Ask a Morse Transmission Engineer for complete details.
Morse Chain Co., Ithaca, N.Y., U.S.A.
Branches in Principal Cities.
2679
MORSE SILENT CHAIN DRIVES

plant of the Chicago Mill and Lumber Corporation, an affiliated organization, and purposes to develop a large capacity of high-grade insulating board. All equipment purchases will be made by the Paepcke Corporation, the parent organization, and construction will be under the supervision of G. W. Powers, who will be in charge of production at the mill. Hardy S. Ferguson, 200 Fifth avenue, New York, is consulting engineer for the project.

Somerville, Mass.—Ginsberg Brothers, Inc., recently chartered under state laws with a capital of $182,000, is operating a mill at Somerville for the manufacture of paper supplies and will not engage in the manufacture of paper boxes as recently referred to in these columns. The company operates also as general agent for the Consolidated Paper Bag Company. Samuel L. Ginsberg is president.

New Companies, Etc.

Lawrence, Mass.—The Munroe Paper Corporation has been incorporated with capital of $15,000, to manufacture and deal in paper goods. Frank L. Kozol, is president; and Abraham T. Alper, 30 State street, Boston, treasurer.

Bergenfield, N. J.—The Bergenfield Calendar Manufacturing Company, has been incorporated with capital of $125,000, to manufacture and deal in calendars and other paper products. The incorporators are Rudolph Dittus and Grove Webster, 26 Palisade avenue, Bergenfield. Last noted is representative.

Brooklyn, N. Y.—The Reliable Paper Mills Supply Corporation has been incorporated with capital of $25,000, to manufacture and deal in paper mill supplies. The company will be represented by G. S. Fishman, 38 Park Row, New York.

New York, N. Y.—General Northern and Southern Paper Company, has been incorporated with capital of $10,000, to manufacture and deal in paper stocks, etc. Samuel Klinger, 405 Sutter avenue, Brooklyn, is representative.

Plans for Superintendents Meeting

The Ladies' Entertainment Committee, of which Mrs. D. C. Everest is chairman, has decided that Friday, June 7, will be a banner day for the Ladies who attend the Tenth Anniversary Convention of the American Pulp and Paper Mill Superintendents Association. The ladies will leave Wausau at 10 A. M. for the north woods, through the scenic Wisconsin River Valley. Mrs. Everest has picked out the most outstanding resort in Northern Wisconsin for the afternoon's outing. Essex Lodge, which is about 5 miles north of Tomahawk on beautiful Clear Lake, will be the destination. Luncheon will be served at this resort and the balance of the afternoon spent in boating, fishing, swimming and golf, or they can roam around in the vicinity of Clear Lake if they wish. Essex Lodge is noted for its natural beauty and there isn't a better place in Wisconsin for a vacation.

The ladies will arrive back in Wausau in time for a dinner party at the Wausau Club, followed by a theatre party.

Some of the subjects for the general sessions will be as follows:

"Common Sense Engineering" (pertaining to dryer drainage) by A. E. Broughton, Healy-Ruff Company, of St. Paul, Minn.

"The Continuous Weighing Scale" (the weighing of web paper continuously on the machine on the run) by E. G. Thomas, Toledo Scale Company, Toledo, Ohio.

"Economical Operation Pulp and Paper Mill," by Jos. H. Slater, General Manager, Escanaba Paper Company, Escanaba, Mich.

"Perfect Pulp and Paper Mill Control," by E. C. Gildenzopf, Congoleum-Nairn Company, Asbestos, Md.

"The Advance of the Modern Paper Machine," by G. A. Macklem, Beloit Iron Works, Beloit, Wis.

The main speaker at the joint banquet on Thursday night, June 6, will be Douglass Malloch, a noted Poet and Author of Chicago.

All those in the East who desire to join a special train for Wausau are requested to get in touch with Mr. James Ramsay, Box 902, Wilmington, Del.

Obituary

John A. Church

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, May 7, 1929.—A. T. Nesbitt, head of the Dayton House of the Cincinnati Cordage and Paper Company, and a number of other Dayton tradesmen and friends attended the funeral last Wednesday afternoon of John A. Church, president of the Cincinnati Cordage and Paper Company, in Cincinnati. Mr. Church expired at his Cincinnati home Monday morning. He had been ill only a short time and the news of his death came as a profound shock to the trade, in which he was widely known.

Mr. Church had returned from a vacation spent in Florida, only a short time before he was seized with his fatal illness. He had been a resident of Cincinnati the greater part of his life which was spent in the paper business. Surviving him are his widow, Josephine Church, two sons, Edward and John, and a daughter, Josephine.

The Dayton branch of the Cincinnati Cordage and Paper Company closed on the day of the funeral. A number of Miami Valley paper manufacturers who had known Mr. Church for many years, attended the obsequies.

Mr. Nesbitt, who began in Dayton as the firm's representative, finally establishing the Dayton House, now located at 535 East Third street, is a vice-president of the Cincinnati Company and general manager of the Dayton House. He has been identified with the concern in Dayton for more than a quarter of a century.

Mrs. E. B. Weston

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, May 7, 1929.—A cablegram from Hamilton, Bermuda, April 29, carried the sad information concerning the death of Mrs. Edward Banning Weston, wife of E. B. Weston, paper manufacturer, of this city, at her winter home, "The Chimneys." When last heard from Mrs. Weston was in excellent health and news of her demise came as a shock to her friends.

During her long residence in Dayton, Mrs. Weston was prominent in society and was interested in various welfare movements. Before her marriage she was Miss Blanche Phillips, daughter of T. A. Phillips. Her father was a prominent resident of Dayton, having been interested in different paper concerns.

Mrs. Weston is survived by her husband, who is at the head of the Weston Paper and Manufacturing Company, Bacon street; a son, Wallace Weston, who is identified with the paper mill owned by his father in Terre Haute, Ind., and four daughters, Miss Delight, who was with her mother when she died; Mrs. Marguerite Afflerbach, Philadelphia, Pa.; Mrs. Thirza Campbell, wife of a captain in the British Army and temporarily residing in Hong Kong, China; Mrs. Winifred Wooten, wife of a major in the British Army and at present in Malta.

John McNaughton

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., May 6, 1929.—Announcement is made of the death last week of John McNaughton, of Kaukauna, Wis., at the age of 43. He was treasurer and general manager of the Outagamie Paper Company, of Kaukauna, for a number of years until it was bought by the Patten Paper Company, Ltd., in 1924. Mr. McNaughton also was president of the Bank of Kaukauna.

George W. Parsons

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 7, 1929.—Word has been received here of the death at Belmont, Mass., of George W. Parsons, 60, a director in the Fiberloid Company of Indian Orchard, Mass., of which concern he was sales manager for a time. He had been employed at the Riverside Division of the American Writing Paper Company previous to going with the Fiberloid Company serving in several capacities. Burial was in Springfield, Mass., where he was born.

Here Are Some Facts You Should Know!

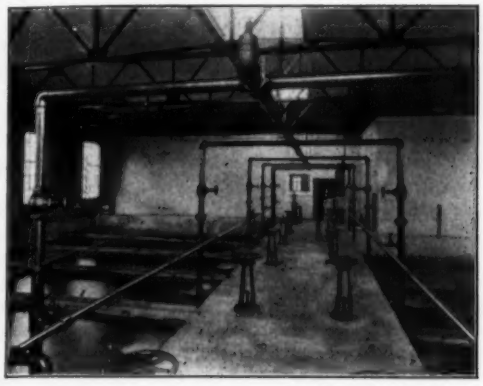
HERE are some facts you should know—and probably you do know most of them. You know, of course, that your profits are largely dependent upon your ability to produce a better sheet than your competitors can produce for the same money. You probably know, too, that you can produce a better sheet if your water is filtered to remove all pollution, dirt and debris.

But what facts have you got about filtration and filters? If you have filters installed are they working as efficiently as they should? Are you getting sufficient capacity or should you have repairs or additions to your filtration system to give you greater capacity and efficiency?

If you haven't got filters installed would it be to your advantage to make an installation? What improvement would filters make on the paper you are producing? Would filtration help you get an edge on competitors by helping you produce a better sheet at the same price? Would filtration help you avoid shut downs due to water conditions? What do other leading mills think about filtration?

These are some of the facts you should know—and can know with very little effort on your part. The Norwood Engineering Company, the largest manufacturers of water filters for the paper industry, maintains a free engineering consultation service for the express purpose of helping you know the important facts bearing on these questions.

You are invited to write for Norwood catalogs which will give you definite facts about Norwood filters—and you are invited to put your filter problems or questions up to the Norwood engineers for solution. You will find it to your advantage to write Norwood now, and your inquiry will place you under no obligation.



This is a typical installation of Norwood Gravity Filters in a paper mill. Ask for a list of installations in your vicinity.

You can't go wrong with a Norwood installation of Filters, Calenders, Pluters, Dusters, Rag Thrashers, Folding Machines or other equipment. Ask for catalogs and specifications.

Norwood Engineering Co.
Florence, Mass.

NORWOOD

Newspaper Securities Returned by I. P. Co.

The financial alliance between the International Paper Company and Frank E. Gannett, controlling owner of a chain of seventeen daily newspapers, terminated Saturday when Mr. Gannett delivered to Archibald R. Graustein, president of the company, his check for $2,781,158.30 in exchange for securities of *The Brooklyn Daily Eagle, Albany Knickerbocker Press, Albany News* and *Ithaca Journal-News.*

The International Paper Company, Mr. Graustein testified on Tuesday of last week before the Federal Trade Commission, helped Mr. Gannett last Fall to finance the addition of these four newspapers to his chain. In a statement issued the same day Mr. Gannett described the transaction as "a temporary arrangement" and denied that it involved any control by the paper and power organization over the management or editorial policies of the newspapers financed.

The repurchase of the securities, it was declared in the leading editorial in *The Brooklyn Daily Eagle* Saturday, involved a financial loss to Mr. Gannett and the four publications as well as the surrender by the International Paper Company of some securities not yet callable. In a letter to Mr. Graustein, tendering his check, Mr. Gannett defended the original transaction and the motives which inspired it.

The first announcement of the repurchase of the Gannett stock was made in *The Brooklyn Daily Eagle*, which published the following letter from Mr. Gannett to Mr. Graustein:

Dear Graustein:

In accordance with our verbal understanding I am handing you herewith check on the Chemical National Bank and Trust Company for $2,781,158.30, to repay in full to date with interest your investment in the securities of the Brooklyn Publishing Corporation (which controls the stock of *The Brooklyn Daily Eagle*), the *Albany Press Company* and *The Ithaca Journal-News.*

Will you please deliver to me all of these securities and contract so that the entire transaction will be terminated?

We entered into this arrangement in good faith; it was a straightforward, entirely legitimate business transaction, mutually advantageous and desirable, which should not be questioned; but there has been criticism of the policy of your company holding even a minority interest in a newspaper. Without discussing that contention, I feel it is better to remove all possibility of a misinterpretation of the motive which actuated our relationship.

Let me express to you my appreciation of your willingness to part with a good investment by agreeing to sell to me securities not yet callable."

Mr. Graustein Before Trade Commission

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 1, 1929.—A. R. Graustein, president of the International Paper and Power Company; Robert L. O'Brien, former president and James Garfield, clerk of the Boston Publishing Company, appeared before the Federal Trade Commission in connection with the purchase of stock of the *Boston Herald and Traveler* by the International company.

Mr. Graustein testified not only in connection with stock ownership in the Boston papers but in newspapers in other parts of the country. He stated that the International company owns some $250,000 worth of preferred stock of the *Chicago Daily News* which was purchased from Walter Strong, and this is four and fifteen one hundreds of the total shares of the preferred. The International, testified Mr. Graustein, also owns 5,000 shares of the common stock of the paper.

The Commission was told also that the International owns 10,000 shares of common stock of the *Chicago Journal* which is one third of the common stock of the paper, and $600,000 worth of preferred, which is to total preferred issue.

The International also owns debentures issued by Bryan, Thomasson Newspapers, Inc., which owns a string of papers including the *Tampa Tribune*, the *Greensboro* (N. C.) *Record*, and the *Chicago Journal.*

Mr. Graustein stated also that the International owns $450,000 worth of the stock of the *Knickerbocker Press* and of the *Albany News* and this is held in the name of the Piedmont Press, Inc., a subsidiary of the International. The Piedmont Press owns all of the preferred stock of this paper and 3,000 shares of the common which is 30 per cent. It was purchased from Frank E. Gannett, the well known newspaper owner. The International also is a stock holder in the *Brooklyn Daily Eagle.*

In connection with a purchase in the interest of the *Boston Herald and Traveler* Mr. Graustein stated that he began negotiations in May 1926, and he dealt with Sidney W. Winslow, one of the large stockholders.

The earnings of the paper in 1928, he said, were less than in 1927 but lately they have again increased so that the profit to the International has amounted to at least $1,000,000. The decrease in the profit in 1928 under 1927, said Mr. Graustein was perhaps $100,000.

At the time the International purchased stock, of which it now has 50 per cent and not controlling interest, it paid about eleven times the earning value of the paper.

The International paid $525 per share for the stock of the Boston papers, testified Mr. Graustein for 10,248 shares which totals about $10,380,000. The earnings of the paper for the year ending December, 1927, were $941,270.

Mr. O'Brien, who is still owner of 836 shares of the company, stated that in April of this year the circulation of the *Traveler* was 173,000 paid. He told the Commission that he sold his shares, just half of them, at the same price as that sold by the other stockholders and he denied that he was the "pivotal" stockholder At one time he owned 1736 shares of the stock of the paper which was between 11 and 12 per cent he stated.

It was testified by the three witnesses that the International was not trying to control the editorial policy of the papers into which it is buying but only to see that news print paper is purchased from the International Company. Mr. O'Brien said that in his opinion the International did not pay what the paper was worth and he testified that he has since been offered twice what the International paid him for his remaining stock.

Mr. Garfield testified that there has been no change in editorial policy since the International became a stockholder of the company.

Boston Paper Market Conditions

BOSTON, Mass., May 6, 1928.—The volume of paper, both fine and coarse, selling in this market the last week has been at least fair, some houses reporting a good demand for all times, although it is spotty in certain quarters. With one house the unit of sales is small, but the aggregate is sizable. There is more demand than there was from the manufacturing trade, especially the textile and shoe industry. Prices are firm.

The improvement in the box board situation has been sustained, although conditions are far from ideal. Sellers are alert to secure new business, but as a whole decline to cut prices to secure orders, indicating the trend towards a healthy market. Values generally remain at the same levels as those of a week ago.

A well known dealer says that conditions are rather discouraging to packers of waste paper, especially in mixed papers and folded news, but adds that when prevailing prices in other cities, such as New York and Philadelphia, are considered, the trade in Boston is not so badly off. There is no question, however, he says, but that present low prices have discouraged considerably the collectors of the lower grades of paper. In bagging, it is now difficult to secure more than 1.65 for scrap sisal for shredding. This commodity has recently sold at 1.60.

BALANCED ROLLS for BALANCED PRODUCTION

Smooth running rolls are the very life of a paper machine and of a machine's output. A full complement of accurately balanced rolls is an essential to profitable production. A single poorly balanced or out-of-true roll can mar tons of paper, ruin costly wires and felts and hobble performance. *Every* Bagley & Sewall roll *must* be trued to *precise running balance* before it leaves our hands. Special apparatus and special facilities enable us to supply any type or size of rolls, standard or special, of brass, bronze, iron, steel or aluminum, rubber covered, brass cased or burnished, on short notice — and at a fair price.

We'd like to tell you more about them—write us

The Bagley & Sewall Co.

Watertown, N.Y.

New York Trade Jottings

The Bermingham and Prosser Company, Inc., paper manufacturers, announce the removal of their New York offices to 10 East 40th street. Their new telephone number is Ashland 5852.

* * *

Paul E. Vernon, formerly with Paul E. Vernon & Co., paper merchants, of this city, is enjoying a pleasure trip through Europe and the East, and plans to return towards midsummer.

* * *

The Beekman Paper and Card company, of 137 Varick street, New York, have issued a timely and useful baseball schedule and memorandum book containing the official schedules of the National and American leagues.

* * *

Endicott Rantoul, manager of the Mulch Paper Department of the International Power and Paper Company, has returned from a trip to the Bermudas, greatly benefited by his stay in the beautiful islands.

* * *

Frank Floyd, secretary of the National Paper Trade Association of the United States, is scheduled to address the New York Division of the Salesmen's Association of the Paper Industry at the next weekly luncheon and meeting next Monday, to be held at the Canadian Club, New York.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, spent several days in Washington, D. C., last week, attending meetings of the United States Chamber of Commerce, the American Trade Executives, and the Federal Trade Commission hearings on the International's news print operations. He leaves New York tomorrow, Friday, accompanied by his wife, on an inspection tour of the news print mills in the Great Lakes territory.

Changes in Zellerbach Los Angeles Division

The board of directors of Zellerbach Paper Company announced, effective as of May 1, the election of J. Y. Baruh to vice president of the corporation, and the promotion of V. E. Hecht to the position of manager of the Los Angeles Division. Mr. Baruh has been manager of the Southern California store for the past thirty years and takes over the duties of vice president with a wide experience in the paper business, where his counsel and advice on all important problems will be very valuable.

Mr. Hecht has trained under Mr. Baruh for twenty years, is thoroughly conversant with the paper business and has a host of friends in the Southern part of the State who are congratulating him on his well merited promotion.

Mr. Baruh will continue to reside in Los Angeles, where he will handle executive matters for the company.

In a notice announcing the changes, Isadore Zellerbach, president of the company, said: "These promotions are made upon merit, long service, loyalty and success. The scope of each of these officials has been broadened and their responsibilities increased for the express purpose of giving to our customers better service than they have ever had. This thought is in line with our well known policy that the interest of our customers is our first consideration."

Johns-Manville Move Western Division

CHICAGO, May 3, 1929.—The Johns-Manville Corporation announces the removal on May 1 of its Western Division headquarters from South Michigan Avenue and 18th Street to 230 North Michigan Avenue, (the southwest corner of Michigan Avenue and South Water Street), Chicago.

The new offices, occupying larger space required by the rapid expansion of the business, are located in the Carbide and Carbon building, telephone Franklin 9500.

J. C. Wilberding Addresses Paper Salesmen

There was an excellent attendance of members at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, held at the Canadian Club, New York, last Monday, May 6.

J. C. Wilberding, the principal speaker of the occasion, who is vice president of the Gravure Service Corporation, gave a very instructive and interesting address on "Rotogravure." In a comprehensive manner, Mr. Wilberding explained how Rotogravure was printed and stated that the character of the paper is very important to the printed results.

He declared that the making of Rotogravure paper is a specialized science that has been so developed that there is available a paper of regularly uniform quality possessing the peculiar combination of opacity and absorptive power required for Rotogravure printing.

Mr. Wilberding showed how rapidly the use of this process had expanded in this country in recent years, stating that while six leading newspapers put on Rotogravure sections in 1914, at the present time no less than 75 newspapers in the United States are printing Rotogravure sections. He declared that Rotogravure is being used largely for high-grade and artistic booklets.

Mr. Wilberding also showed how rapidly the circulations of the newspapers printing Rotogravure sections had expanded since adopting the process, thus enabling the publishers to secure materially higher rates for advertising.

Brotherhood to Meet May 10

ALBANY, N. Y., May 4, 1929.—A meeting of the International Brotherhood of Papermakers is scheduled for May 10 when the board of canvassers will count and tabulate the results of the referendum submitted to locals in this country and Canada. A number of ballots, including several from Northern New York, have already reached headquarters. Many of the locals will cast their ballots during the coming week. One of the propositions is to increase the salary of Arthur Huggins, secretary of the organization, from $3,000 to $4,000 a year and it is expected that this will be carried. The board of canvassers is composed of M. J. McClain, of Holyoke; Thomas Moran, of Troy, and William Bilson, of Niagara Falls. It is expected that the counting and tabulating of the vote will consume about a week as twelve propositions have been submitted to the voters. J. P. Burke, of Fort Edward, head of the sulphite workers' union, Frank P. Barry, vice president of the international body, and Jacob Stephans, a labor organizer, left this city during the past week by automobile for Gilman, Vt., for a conference with the Gilman Paper Company in connection with the signing of new wage and working agreements. William R. Smith, president of the local body, is now in the Middle West on the same mission. He recently held a conference with H. W. Sullivan, vice president of the pulp workers' union at Port Arthur, Ontario, and expects to be absent about two weeks. During his absence Arthur Huggins, secretary of the union, is in charge of the international headquarters in this city.

Bids for Government Waste Paper

WASHINGTON, D. C., May 8, 1929.—The Government Printing Office will receive bids on June 3 for the purchase of paper shavings, waste paper etc. which may accumulate at the Printing Office during the fiscal year beginning July 1.

Estimated quantities of waste are as follows:

2,800,000 pounds of wrappers from rolls and flat stock; 20,000 pounds shavings from blank books etc.; 500,000 pounds shavings from book papers etc.; 600,000 pounds printed waste, free from ground wood; 300,000 pounds postal card waste; 200,000 pounds cuttings from strawboard etc.; 5,000 pounds twine and rope from bundles; 175,000 pounds discarded publications etc.; 150,000 pounds newsprint and newsprint shavings; 60,000 pounds used monotype keyboard paper.

M&W ROTARY SCREEN

FOR FOURDRINIER AND CYLINDER PAPER MACHINES

QUICK CHANGEOVER

QUICK WASHUP

Flat Screen Plates Save Money

The plates used in the "M & W" Rotary Flat-Plate Screen are 12 x 43 x 5/16 inches, same standard size as used in flat screens. In fact, old flat-screen plates may be used by recutting the slots.

When the slots become worn, these flat plates may be rerolled and recut to the original size. This may be done several times. After that they may still be recut for coarser stock.

The plates may be changed on the cylinder in one hour.

A mill may carry several sets of plates, cut to suit various stocks. And the cost of changing is less than the cost of running with "good enough" plates.

Paper mill executives seeking the cleanest paper at the lowest screening cost will find many other interesting features in "M & W" Rotary Flat-Plate Screens.

A catalog fully describing them will be sent on request.

THE MOORE & WHITE CO., NORTH PHILA. STATION PHILADELPHIA, PA.

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Power Plant Section

Reducing Power Costs Through Unit Treatment

Conducted by Reginald Trautschold, Consulting Engineer

Some Notes on Belt and Belting Maintenance

The secret of economical belting practice is very largely a question of proper belt maintenance. With this contention, little exception can well be taken. Why then is the belting problem frequently such a troublesome one in so many mills? The reason may very well be that there is such a wide choice of high grade belting available at the present time that the wrong belt is very apt to be put in the wrong place. When this occurs, and it happens much oftener than is generally appreciated, the resulting failure is not the fault of the belting. It is distinctly a matter of improper belt maintenance, for the selection of belting in respect to type and proper size for the installation are very surely considerations of maintenance.

In short, there is no type of belting which can be said to be the best under all conditions of service encountered about pulp and paper mills. The standardization upon any one type of belt, though it might possibly pay from the viewpoint of the stock room reduced belting costs, slashed them very decidedly in some cases, Agent, is rarely, if ever, feasible. True, a number of instances could be cited where some particular mills have quite materially reduced belting costs, slashed them very decidedly in some cases, by standardizing upon some particular type of belt, but even in such instances the results are far from conclusive. The adopted belt may very well have been simply more generally adaptable than a previous collection of misfit, not necessarily inferior, belts.

One well known mill official who made a study of the use of various types of belting for paper mill services found that when a mill exercised care in maintaining its equipment always in good order suitable leather belting proved not only the most economical in the long run but also gave the greatest production. On the other hand, where a mill did not take care of its equipment, making repairs only when absolutely necessary, etc., he found that the very cheapest belting which could be purchased was the best suited. Very much in line with this is the policy of a prominent belt manufacturing concern of insisting upon determining the service or conditions under which the belts are to operate and of not supplying a leather belt unless the conditions as determined were suitable to leather belt drives. Under such circumstances, when a leather belt is supplied it is held that the leather belt always proves more economical than any other type of belt.

Admittedly, quality leather belting is quite high in first cost, so its possible cheapness in the long run can only be attributed to low maintenance. Incidentally, the chief item in belting costs is not the initial outlay but that entailed in time lost in making belt adjustments and repairs. Such items, moreover, do not appear on the stock room records nor are they entered on the books of the purchasing department. Naturally, considerations such as these complicate the selection of the best belt to employ, as does also the fact that there are very few mills in the country which have any actual knowledge of their true belting costs. Consequently, the experiences of the few which have should be most pertinent.

At the Cumberland Mills of the S. D. Warren Company, Killey E. Terry, superintendent of power, is reputed to be one of the best posted men in the industry in regard to this belting situation, so possibly belting practices in these mills may be fairly advanced as at least indicative of an excellent selection of relatively carefree and economical transmission belting. In all, there are some 70,000 to 80,000 feet of transmission belting in service, close to 70 per cent of which is leather belting, 25 per cent rubber and about 5 per cent fabric transmission. At the Bogalusa Paper Company, about 60 per cent of the belts now in service are leather and it is reported that further drives will soon be supplied with leather transmissions.

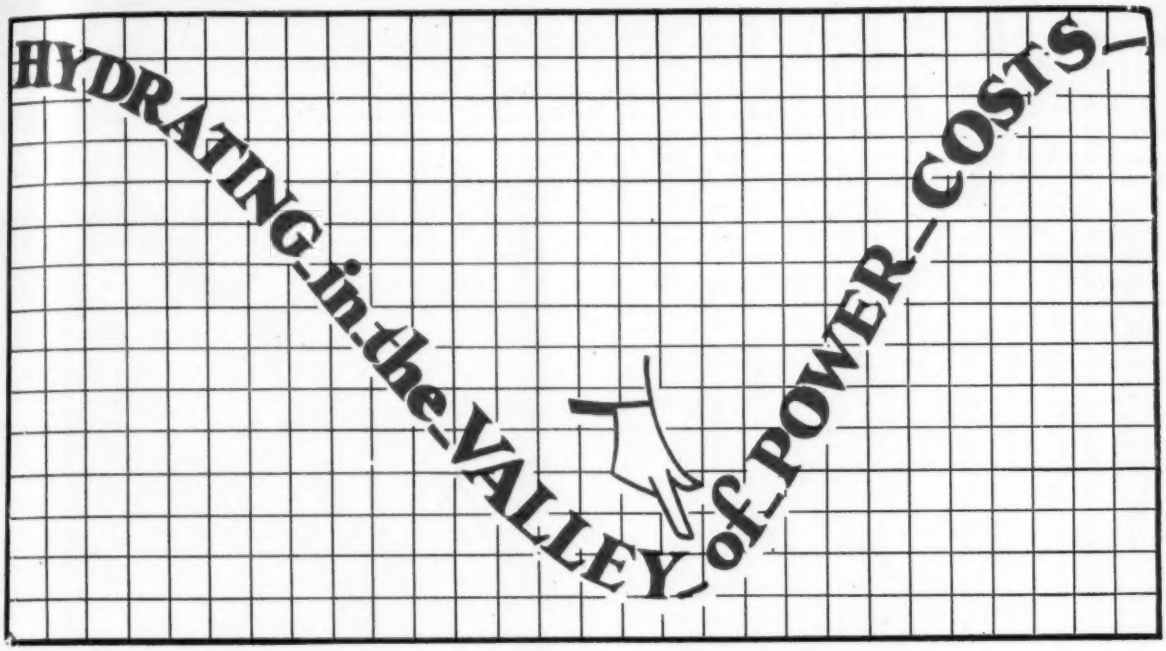
These citations are not to be interpreted as advocating the exclusive use of leather belting, or even as a recommendation of supplying two-thirds of the mill drives with leather transmissions, though about such proportion appears to meet with considerable favor in mills which have given the belting situation most attention, but rather as focussing attention upon the necessity from a maintenance standpoint of selecting the suitable type of belt for each individual service. Consequently, a consideration of economical belting practices can very well be approached by advancing a few brief remarks concerning the types of approved belting which are available for transmission services at the present time and then taking up in somewhat greater detail an exposition of some of the major factors entailed in the all embracing question of belt maintenance.

Types of Available Belting

A broad general classification of belting into leather and the various fabric belts will not suffice, moreover, for while there are not as many types of leather belts as of fabric belts, there are several types of leather belts with more or less individual characteristics so far as transmission qualifications are concerned. This does not mean brands of leather belting, of which there are probably two or three hundred, but distinctive types of leather belting. First, there is the regular oak-tanned leather belt cemented with non-waterproof glue. It is a highly serviceable belt in many instances, but not in all. Second, there is the waterproof leather belt cemented with a compound which is insoluble in water. Then there are the re-tanned type of leather belting, the combination of re-tanned and oak, and a few other types best designated as special belts.

Among the fabric belts are the camel hair, stitched canvas, solid woven fabric, many types of rubber belting, fine duck and coarse duck transmissions, the built-up belts bound together with all kinds of cementing friction, etc. All of these are excellent in their proper places, but in wrong places are the cause of endless annoyance and expense, as, for that matter, are leather belts.

The belt which can deliver the greatest amount of power to the driven pulley, has the highest traction qualities, may be the most effective, but is not necessarily the most suitable or most economical. The consideration of endurance, of belt life, is always a dominant factor, and this is determined in large measure by the amount of internal resistance, or friction, to which the belt is subjected. A belt offering little resistance to bending, which wraps and grips the pulley well, is also apt to offer less resistance to constant torsion and tension than a belt which is not so flexible. Nevertheless, for small pulley high speed work, the more flexible



THE NOBLE & WOOD PRE-HYDRATION SYSTEM provides a means for the preliminary preparation of stock over night or at other times when power costs are lowest. It furnishes stock to the beaters in such condition that beating time, also, is considerably reduced, and a tougher, firmer sheet is assured.

Handling is simplified, as pulp can be taken directly from the unloading platform, flowed through the system to any part of the plant and delivered to the beaters at any desired consistency.

A patented propeller principle * keeps the stock constantly circulating, without dead spots or pockets. Sour stock, the bugaboo of former attempts at pre-hydrating, is completely eliminated. Color added at this stage is uniformly mixed before the stock reaches the beaters.

This device can be installed in large hydration tanks where present agitation is inadequate. We'll be glad to give you details,

Economies and efficiencies effected by this system place mills which buy raw pulp on a favorable competing basis with mills making their own pulp. A talk with a Noble & Wood representative will open your eyes to the new economies and improved production possible with this new Pre-Hyration System. Tell us when you'd like to see him.

NOBLE & WOOD
MACHINE COMPANY
Hoosick Falls New York

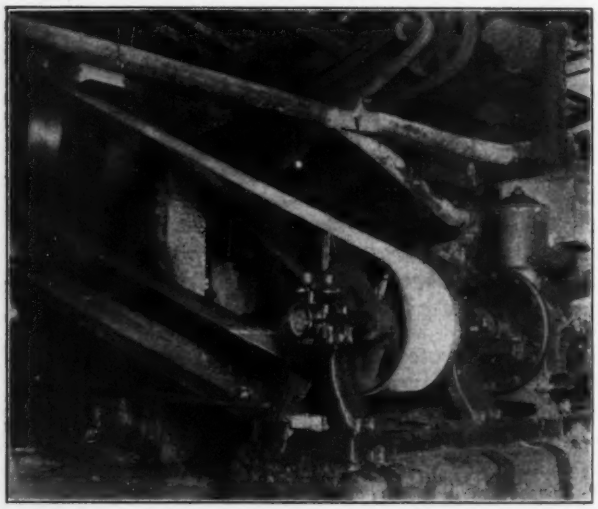
belts should invariably be used, attaining the requisite tensile strength and effective pull by dependence upon belt width rather than belt thickness.

A heavy double leather belt running about a small pulley at high speed, particularly of the oak-tanned type, is doomed. Likewise, a 6 or 8 ply rubber or stitched canvas belt running at 1,700 or 1,800 r.p.m. cannot stand up if run about a 6 or 8 inch pulley. In most industries, this would be considered so very obvious that the expressed warning might be resented, but in paper mill service the use of abnormally heavy and narrow belts is under certain circumstances not only advisable, but conducive to prolonged belt life and lower belt costs.

This is true where tapered, or cone, pulleys are employed to maintain a definite relation between the speed of the presses, drying cylinders, calendars, etc., in allowing for the shrinkage of the paper. Owing to the taper of the pulleys, the rim speed of the cone face is different at all points and any flat belt is bound to slip. Most of the slippage, incidentally,,occurs along the edge of the belt where the diameter of the cone pulley is the smaller. This differs for the driving and driven pulleys, so the traction of the belt is seriously interfered with and belt wear becomes excessive. Belt deterioration is further aggravated by the fact that in order to hold the belt in a definite position on the cone pulleys guides bearing upon the edges of the belt have to be employed.

Both slippage and belt wear can be partially overcome, i. e., materially reduced, through the use of narrow, relatively thick belts. The enforced slippage is curtailed since the differential between the maximum and minimum of the pulley face circumferences in contact with the two edges of the belt is reduced, belt stretch noticeably controlled by the thicker belt and a much closer speed regulation can be maintained. The guides, of course, should be made broad with well rounded edges.

Owing to the quite generally admitted greater adhesive, or pulley gripping, surface of leather belting, even when wet, triple water-



Courtesy: Cincinnati Rubber Mfg. Co.

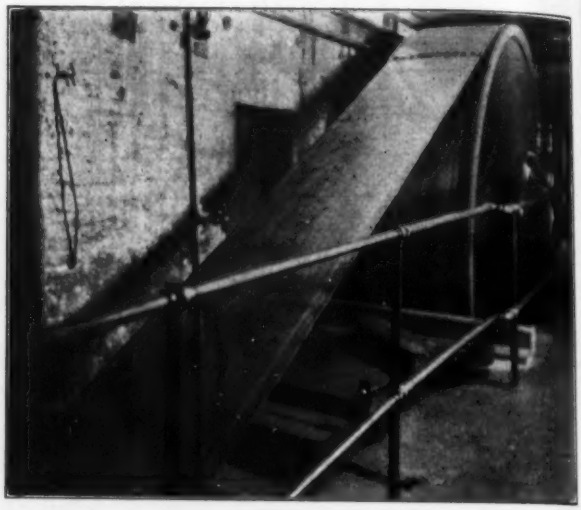
FIG. 1

Heavy Rubber Belt Jordan Drive, 14-inch 8-ply belt transmitting 150 H.P. at the Mt. Vernon Straw Board Co.

proof leather belting with wire sewed edges is claimed to be preferable to rubber belting in such service. An 8-inch triple leather belt can be used in place of a 10-inch, 6-ply rubber belt or a 6-inch triple leather belt in place of an 8-inch, 6-ply rubber belt. The better frictional value of leather makes possible the use of the narrower belts with their inherent advantages.

In the selection of type of belt, atmospheric conditions present a factor which may prove highly potent in respect to belt maintenance. For example, a rubber belt subjected to the action of sulphuric acid or fumes fails promptly. The same is true with a solid woven cotton belt or of the average oak-tanned leather belt. Steam, dampness, dust, etc., also exact their toll. The closely related absorption qualities and belt resilience have also to be taken into consideration in the selection of belt type.

The problem of suitable type selection is indeed a difficult one, the solution of which necessitates not only familiarity with the many good belts available but much practical belting experience



Courtesy: Cincinnati Rubber Mfg. Co.

FIG. 2.

Main Drive, 36-inch 8-ply special rubber belt, at the Franklin Board & Paper Co.

as well. General recommendations can really not be advanced. The characteristic of the belt must be known, the conditions of service accurately determined and the respective potencies of all factors promoting belt deterioration, and invariably they are many and active, carefully weighed. Then only can a proper selection be made. However, the opinion of those qualified to make recommendations cannot be entirely ignored. This does not necessarily mean the opinion of manufacturers of belting, though such opinions should not be considered necessarily biased, but the opinion of paper mill equipment manufacturers for the operation of whose apparatus belts are employed, as well as the opinions of mills which have given the belting situation considerable attention.

The opinion of the Pusey & Jones Company, for example, should be well worth consideration. In a letter to one of its customers, this company states: "We consider a good quality of double leather belting is the very best kind for paper mill use, and in almost all cases it should be of double leather thickness, that is, for the main drives of the machine from the several countershafts in the basement to the cones or pulleys on the machine room floor. In accordance with the several powers usually needed, it may run from 4-inch to 16-inch in widths. Of course a much larger belt, perhaps 20- or 24-inch, may be needed for the main drive for steam engine or other prime mover to the machine jack shaft.

"A few other places such as on the drives of the shake head, fan pump, felt whipper, and slitter shaft, single leather belts should be used, because the driven pulleys are usually very small in diameter and in some cases the power necessary is not very big."

Belt Proportions

The size of a belt in respect to its width and thickness, while already touched upon in the case of cone pulley drives, is also a highly important matter in respect to the maintenance of transmission belting in general. Both width of belt and thickness of belt are also determining factors in the computation of horsepower and load requirements, but a wide, relatively thin belt is

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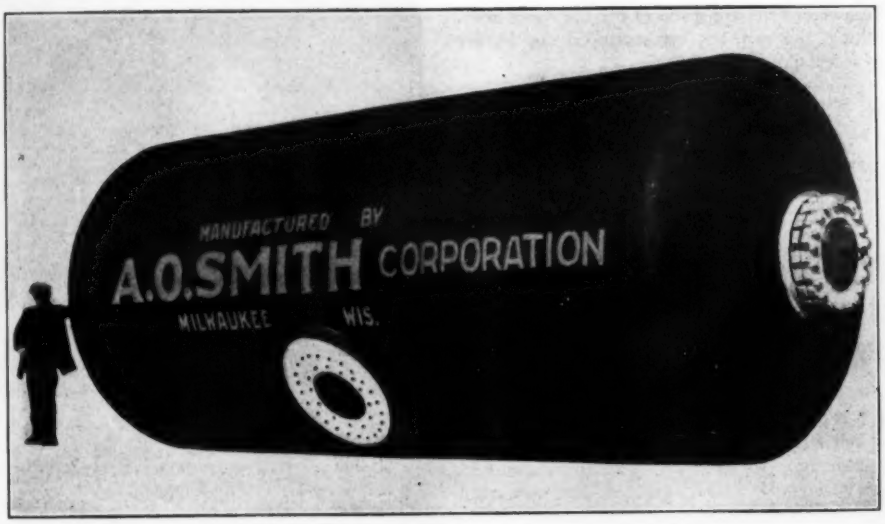

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Thicker walls . . . . . longer life
Resistance to corrosion . . equal in weld and plate
Accurate to dimensions . . simplifies installation
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Advantages thoroughly proven in paper mill operation. Over 800 SMITH Welded large pressure vessels in use all over the world. . . . . .

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SMITH *WELDED* SULPHATE DIGESTERS

preferable for ordinary transmission purposes to a narrow, heavier one. It has more pulley contact and will flex around the pulleys more easily. When a heavy belt is run over small pulleys the varying strain between belt surfaces causes an internal creep which generates heat frictionally and accelerates belt deterioration. Good belting practice calls for the belt to be as wide as the pulleys permit.

Under normal speeds for approved belting, the best results will be obtained with built-up fabric belts when the belt is operated over pulleys with at least 3 inches of diameter for each ply in the belt. For high speed operation, the relation should advisably be a minimum of 4 inches of pulley diameter per ply of belt. Similar relations for single, heavy single; light, heavy and extra heavy double and for triple leather belts are given in the following table. For solid woven belting, the relations recommended for leather belting are generally accepted.

TABLE 1
RECOMMENDED MINIMUM PULLEY DIAMETERS FOR LEATHER BELTS

In Normal Speed Service		In High Speed Service	
Weight of belt	Minimum pulley diam.	Weight of belt	Minimum pulley diam.
Single	9-inch	Single	12-inch
Heavy single	12-inch	Heavy single	16-inch
Light double	15-inch	Light double	20-inch
Heavy double	18-inch	Heavy double	24-inch
Extra heavy double	21-inch	Extra heavy double	28-inch
Triple	27-inch	Triple	36-inch

Another of the chief causes of rapid belt deterioration and high maintenance is the very common fault of over-tight belting. This also pertains to incorrect type selection and unsuitable belt proportioning. It is caused, nine times out of ten, because the belt has not the right friction, clings to the pulley, in the atmospheric and mechanical conditions under which it operates. The insufficient friction leads to the belt being drawn up too tight in a vain effort to prevent excessive belt slippage.

It is not the intention here to make any recommendations in regard to the proper tension for various types of belt, for again

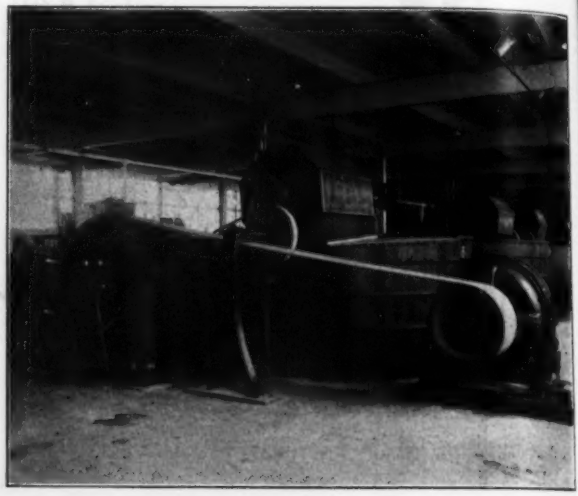
Courtesy: Alexander Bros. Inc.

FIG. 3.
Special Leather Belts, 16-inch Tentacular on 12-foot centers, speed ratio 3 to 1, driving beaters at the John Manning Paper Co.

experience is the best guide. However, the flexibility of the belt is an important consideration and its inherent gripping characteristics. In these respects, the leather belt is generally conceded advantageous, but there have also been some quite marked developments in respect to increasing the flexibility and gripping qualities of other types of belts.

One manufacturer of rubber belts, for example, has brought out a drive belt which secures quite exceptional flexibility for a rubber belt by the simple and effective expedient of constructing the belt without folds or seams. The edges of the various fabric plies are not folded over at the edges of the belt as is customary but are simply squared up and the edges protected with a sealing coating of a suitable rubber compound, or friction. The result is a belt which in construction is identical from edge to edge and consequently uniformly flexible.

The construction permits the use of somewhat lighter belts than when the ordinary type of folded fabric, rubber belting is employed. Customarily, belts with one less ply can be used. The



Courtesy: Alexander Bros. Inc.

FIG. 4.
150-H.P. Beater Drives, 16-inch Tentacular belts on 16-foot centers, speed ratio 2.6 to 1, at the Taggart-Oswego Paper & Bag Corp.

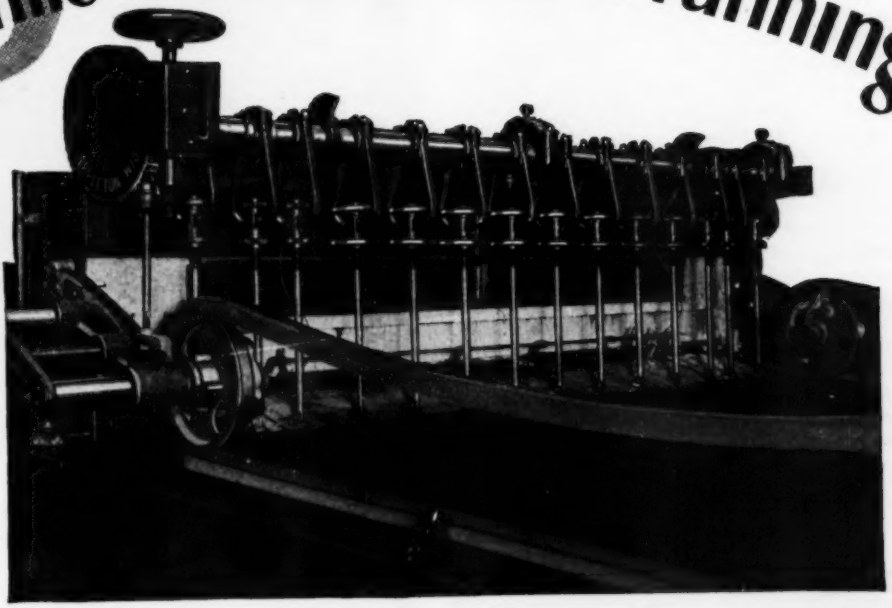
belt does not have to be overloaded in order to secure the necessary pulley grip to transfer its full power, in this respect resembling the leather belt. In the case of the ordinary folded fabric, rubber belt construction, on the other hand, it is recognized good practice to employ a belt with an extra ply in order to compensate for the overloading, excess tightness, of the belting which so greatly aggravates depreciation and is responsible for excessive belt stretch.

Joints and Splices

The cause of as much as 40 per cent of high belt maintenance is often attributable to faulty belt joining. This serious burden can only be obviated by making the belts endless and in the case of leather belting this should always be done if an adequate belt take-up can be provided. In the case of rubber and fabric belts, however, the same remedy is not so feasible, on account of the greater stretch common to such types of belting. Endless fabric belting is obtainable, of course, or can be constructed, but among mills using large numbers of belt drives it is held that the endless fabric belt costs too much in the way of time, money and lost production entailed in cutting and resplicing. Of course, this is entirely a matter of opinion and the wisdom of employing endless fabric belts must be decided by each individual mill. It is always possible to keep a duplicate endless belt of suitable proportions on hand and to resplice the stretched belt at a time which does not interfere with mill production.

Barring the endless belt, some form of belt lacing, wiring or metallic fasteners have to be resorted to in making a belt joint and when this is necessary great care should be exercised in selecting a suitable fastener. Any lacing or fastener will break the grip of the belt on the pulley and so sacrifice power. This is unavoidable, but the loss can be controlled by the use of the best fastener for the particular belt. The clip, hook, clamp or whatever the variety of fastener employed should be proportioned not only to the weight and width of the belt but to the diameter of the pulleys as well. The speed of the belt is also a factor, as is also the atmospheric conditions in which the drive functions.

3 things YOU CAN NOW DO while the machine is running



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—and all of the exclusive operating advantages of the 1929 Voith Inlet that show on the production cost sheet as operating savings.

Consider these three features—

1. ***You can change deckles while the machine is running, thus eliminating the loss of production time in stopping the machine to change deckles.***
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Over 266 Voith Inlets are showing production savings for paper mills throughout the country—helping to make more and better paper while reducing cost. Write today for details on the 1929 Voith Inlet.

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Care must be exercised that the belt does not break behind the fastener, that the belt itself will hold the fasteners securely and that the ends of the belt are squared up. It may be necessary to shellac the ends of the belt in order to have the fasteners hold and always the belt should be most carefully aligned.

Belt Dressings

While all types of belts may be said to require an occasional dressing in order to keep them in good shape, no belt pulls its load by virtue of being stuck to the pulleys. For this reason, sticky belt dressing should never be employed. Every belt user has probably been warned against belt dressings containing rosins and asphalt, yet there are probably more belts, fabric and leather, ruined by sticky compounds than from almost any other cause. It consumes power to break the grip of a sticky belt dressing and tears the fabric of the belt. The function of a belt dressing is simply that of a belt preservative, to make the belt flexible and soft, not that of an aid in pulling the load and transmitting power.

Leather belt manufacturers customarily put out a preservative suitable for their product, but the mistake should not be made of employing the same dressing for both oak-tanned and re-tanned leather belts. A re-tanned belt is already fairly well saturated with various ingredients and there are only certain substances which will penetrate it and effect the desired results. In the case of rubber belting, no safe dressing will penetrate, so about the only dressing it requires is an occasional application of ordinary commercial castor oil. Such a dressing will simply clean up the belt, removing the "bloom" on a new belt and imparting to an old belt a slightly "tacky," not sticky, quality.

Stitched canvas belting of the finer grades should not require any dressing, already being pretty thoroughly impregnated in this respect. For camel hair belting, if any is used, a special oil provided by the belt manufacturer only should be used.

Belt Abuse

Of course, belt abuse is a prevalent cause of high belt maintenance and it would seem almost unnecessary to point out the necessity of safeguarding belting, but apparently it is advisable to do so. It would seem as if a proper appreciation of the value of proper belt maintenance is far from being general. In the first place, there are many thousands of dollars tied up in belting in the average mill which should command every effort for its conservation. At the Cumberland Mills of the S. D. Warren Company, in excess of $100,000.00 is invested in belts, for illustration. Then there is that even greater responsibility of keeping the mill running. Excessive belt maintenance may indeed be costly.

Courtesy: Allis-Chalmers Mfg. Co.

FIG. 5.
65-H.P. "V" belt (Texrope) drives at the Watervliet Paper Co.

Of course, it is quite out of the question to point out all the abuses to which belts may be subjected, but a few may be mentioned. Some, in fact, already have been, such as the evils of tight belts, faulty joints, etc., but there are others which have apparently been ignored and still should be at least mentioned.

One of these is carelessness in the application of the belt load. A sudden dumping of the load, as when a controlling jaw clutch is abruptly thrown in, is extremely detrimental to a transmission belt. The shock is transmitted to the belt joint and the fastening, the splice is subjected to aggravated strains which are very apt to tear the fastening and break the belt. The substitution of friction clutches for those of the jaw type go far to overcome this abuse, but even the friction clutches can readily ruin a belt if not operated properly. No belt should be subjected to the extra duty of serving as a positive shock absorber. Its function is something quite different. One prominent plant has instigated the practice of never employing jaw clutches where the speed is greater than 60 r.p.m. and even then to shut down before throwing the clutch whenever such precaution is feasible.

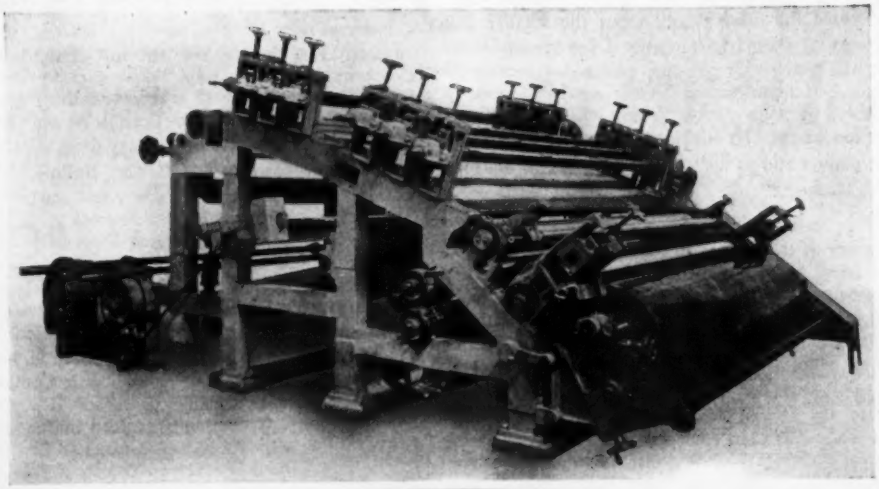
Courtesy: Allis-Chalmers Mfg. Co.

FIG. 6.
75-H.P. "V" Belt (Texrope) Pulp Beater Drives at the Flambeau Paper Co.

Another very prevalent form of belt abuse responsible for high belt maintenance is the crude and frequently faulty construction of belt shifters. The constant rubbing of a belt against an ordinary iron bar shifter quickly ruins almost any belt. The obvious remedy is the substitution of some roller type shifter. A simple pipe sleeve construction is vastly better than a plain bar, but the sleeve should turn freely, which is far from always being the case.

The belt shifter abuse is very much in line with that other careless fault of allowing the belt to rub up against a wall, piece of equipment or obstruction of some kind. Obviously, scraping the edge of the belt against any such rigid part plays havoc with the belt and the worst of it is that such destruction is apt to be given little attention until the damage causes the belt to fail, precipiating a shutdown which may be very costly. Of course, there is no possible justification for an accident of this character, but nevertheless in very many instances it will be found that much of the belting maintenance burden of a mill is traceable to just such occurrences of gross carelessness.

Sudden changes in belt speed also aggravate belt maintenance, as likewise high speed ratios. The latter are serious for two reasons: 1st, the marked difference in radii of wrap of belt about the driving and driven pulleys, one being abnormally small as a rule, introduces internal strains which quickly "kill" a belt, and 2nd, the belt wrap about the smaller pulley is apt to be quite insufficient for the effective transmission of power, excessive belt slippage with its inherent destructiveness developing. Increasing



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WALDRON

Paper Converting Machinery

the distance between pulley centers will better conditions, of course, but frequently this is not feasible. In such cases, very marked improvement can be effected by increasing the normal wrap of belt by means of a free running, counterweighted, idler pulley carried in a swinging frame in such manner that the idler, or contact, pulley snubs the driving belt about the smaller belt pulley. Several forms of these short center drive arrangements are procurable on the market at present and prove eminently effective in reducing belt maintenance. They must be properly adjusted, however, else the evils of excessively tight belting may develop. The function of the belt snubbing devices is to increase the belt grip on the pulleys and so control belt slippage, to increase belt adhesion, not belt tension.

Special Belts

This is also the secret of the successful short center drive, which incidentally is far from being confined to drives in which the driving belt is snubbed about the smaller pulley. Special belts have been evolved which accomplish the desired result without snubbing, by virtue of a high tenacity developed with which the belts grip the supporting pulleys. That is, the friction developed by the belts is so high that the belts can be used in relatively very high ratio belt drives, say up to 12 to 1, without resorting to any belt snubbing whatever. While a consideration of these special belts may at first seem rather foreign to a discussion on belt maintenance, a brief description of one or two types is quite permissible for the use of such belts can exert no little influence in keeping down the burden of belt maintenance to which every mill is unavoidably subjected.

One of these special belts consists of a backing of either oak tanned leather or Balata fabric to the under side of which are attached relatively narrow longitudinal strips of soft green leather, possessing a very high coefficient of friction. These strips are held in position by means of staggered rows of hollow brass rivets, deeply clinched to form hemispherical depressions, or pockets, on the pulley side of the belt. These pockets act as effective suction cups which very materially increase the grip of the belt on the pulleys. Two drives employing this type of belt are illustrated, the one operating the beaters at the John A. Manning Paper Company, in particular, plainly showing the relatively small arc of belt wrap about the small driving pulley.

Commenting on this drive, E. W. Jones, general superintendent, Green Island Mill, states: "Our beater drives require very severe service of a belt, and any other belt we have used has had to be taken up from time to time whereas the Tentacular (the trade name of the special belt in question) has been running a full year and has never been taken up in that time." The belt is 16 inches in width and the speed ratio 3 to 1, the distance between pulley centers being 12 feet approximately. The driving pulley is 24 inches in diameter and the driven pulley on the beater 72 inches.

The tenacious belt adhesion essential for securing the necessary belt grip over a limited arc of belt wrap is secured in quite a different manner in the drives depicting the operation of a calender at the plant of the Watervliet Paper Company and that running the pulp beaters at the Flambeau Paper Company. In this essentially short center type of belt drive, the transmission consists of a number of endless "V" shaped belts running in individual, conforming grooves on driving and driven sheaves. The sections of the transmitting bands, or belts, being triangular and riding on the inclined walls of the sheave grooves, the aggregate contact area of the various individual belts with the sprockets, hence the traction grip of the drive, is substantially double that which would develop between a flat belt and pulley of the same width for any given arc of belt contact. In other words, with the "V" belt and sprocket arrangement a belt wrap of 120 degrees is about equivalent so far as tractive capacity is concerned to that of a flat belt and pulley wrap of 240 degrees. This form of belt drive, incidentally, has been very favorably received by a number of the prominent paper mills.

From all of which it should therefore be apparent that the secret of economical belt practice is very largely a question of proper belt maintenance.

Power Concerns May Merge

WATERTOWN, N. Y., May 4, 1929.—It is reported on good authority that the management unit of the holdings of the United Corporation may be soon taken over by the Allied Power and Light Corporation in a merger of the interests of both firms. Among the Northern New York firms on which the United Corporation is said to have acquisitory designs are the St. Regis Paper and Power, Northeastern Power, Buffalo, Niagara and Eastern Power, Rochester Central Power, and Mohawk-Hudson, the latter interest having been publicly announced. It is believed that these companies will form connecting links with United Gas Improvement and Public Service of New Jersey in a power service hook-up from Northern New York to Central Delaware. This network of transmission lines would in part be served by the huge hydro-electric project now in process of completion on the Susquehanna River in Maryland. This power plant is being constructed by subsidiaries of the Philadelphia Electric Company, a subsidiary of United Gas Improvement.

The United Corporation organized in January by J. P. Morgan & Co., Bonbright & Co., and Drexel & Co., has purchased large interests in United Gas Improvement, Public Service Corporation of New Jersey, and several up-state utilities including the Mohawk-Hudson Power Corp. at Albany. The Allied Power and Light Corporation was formed about a year ago through the fusion of the Wood & Stevens and the Hodenpyl & Hardy interests and now controls the Commonwealth Power, Penn-Ohio, Edison and other large systems. In a year it has grown to be one of the largest utility construction and management units in the country. Since the entrance of the United Corporation into the utility field it has been firmly believed that the interests controlling the firm intended to make their first step in the field under their own name a large one. Controlled by the United Corporation, the United Gas Improvement Company besides having a controlling interest in many utility systems also has a large financial interest in the American Utilities, Mohawk-Hudson Power, Northeastern Power, Public Service Corporation of New Jersey, Southeastern Power and Light, and others. The Mohawk-Hudson Power Company, said to be the principal unit in the future activities of United Corporation in New York State, is now controlled by United interests to the extent of 458,876 shares, not including purchase made since the year end.

Superintendents and Printers Meet

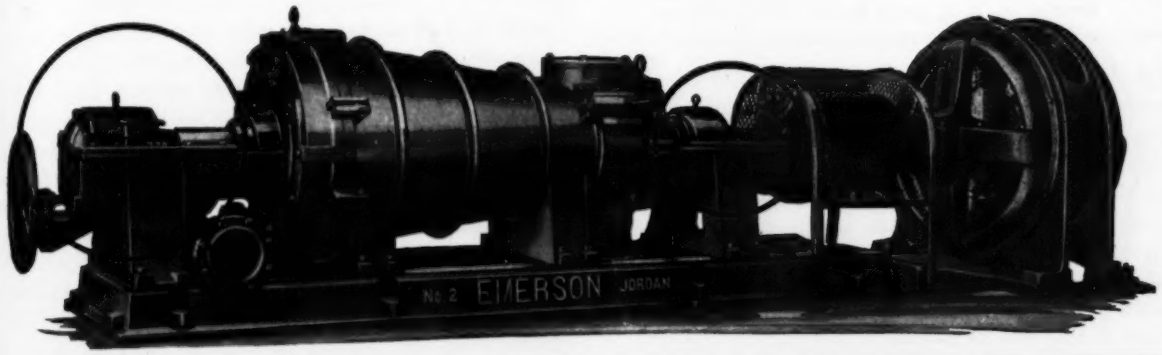
HOLYOKE, Mass., May 7, 1929.—A joint conference of the Connecticut Valley Division of the American Pulp and Paper Mill Superintendent's association with the Connecticut Valley Club of Printing House Craftsmen was held Saturday afternoon at the Hotel Nonotuck. Henry J. Toepfert presided being introduced by John J. White, president of the Printing House Craftsmen. The address was by Benjamin T. Larrabee of the Cumberland Mills, Inc.

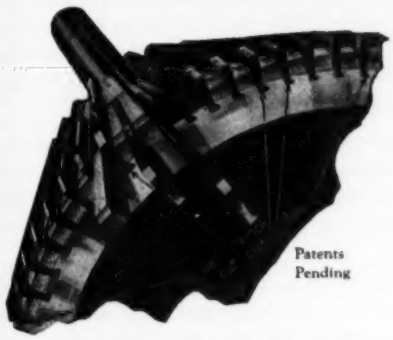
The discussion was on "Problems of the Paper Ruler". T. Francis McSherry treasurer and manager of the Smith Table Company read a paper giving a complete history of ruling machines. A banquet was held, about 150 attending, followed by a musical program and dancing.

Rush Work on Grays Harbor Pulp Plant

PORTLAND, Ore., May 3, 1929.—The Grays Harbor Pulp and Paper Company's new 50-ton pulp plant being constructed adjoining the company's present property, will be completed by the latter part of the summer, according to announcement by W. F. Lucey, manager. Work is being rushed to make up for lost time due to severe storms in March. All heavy machinery for the new plant has arrived and is now being installed.

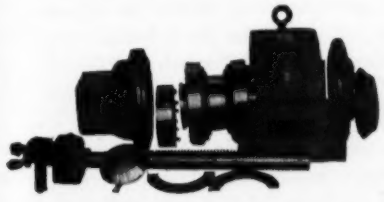
The EMERSON JORDAN *equipped with the* Bolton BANDLESS Plug





Patents Pending

Showing construction of the Bolton Bandless Plug. Knives and woods cannot come out. *NOTE INVERTED EDGES.*



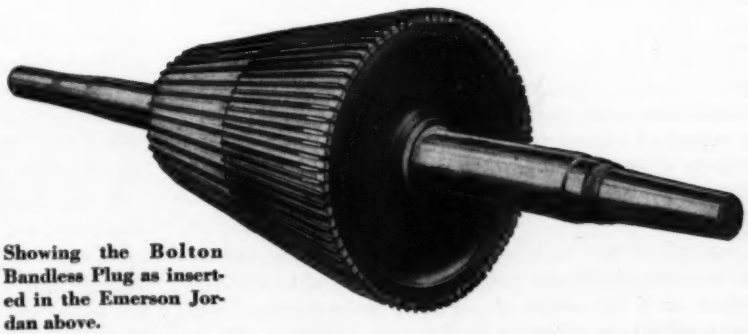
Detail of Timken end bearing which takes care of both radial and thrust.

Now every Emerson Jordan offers you the tremendous advantages of the Bolton BANDLESS Plug and Timken Roller Bearings.

These two great features put the Emerson Jordan in a class by itself for unit control, lasting satisfaction and true economy. No other Jordan has these great construction advantages.

Make sure of all the benefits and savings that result from these two wonderful improvements in Jordan engineering. Standardize on Emerson Jordans.

Write for full information and estimates



Showing the Bolton Bandless Plug as inserted in the Emerson Jordan above.

The EMERSON MANUFACTURING COMPANY

LAWRENCE ≈ ≈ ≈ MASSACHUSETTS

DIVISION OF JOHN W. BOLTON & SONS, Inc.

2683

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NEWS PRINT AND THE TARIFF

When the General Tariff Committee of the American Paper and Pulp Association commenced assembling facts and data to enable it to present its suggestions and needs for adequate tariff protection to the Ways and Means Committee, Paragraph 1672, Free List, read "Standard News Print Paper." This article had been defined by the Treasury Department in a Treasury decision issued in July, 1925, as follows:

"Weight: 500 sheets, each 24 x 36 inches, shall weigh not less than 30 pounds nor more than 36 pounds.

"Rolls: The paper shall be in rolls not less than 16 inches wide and 28 inches in diameter. Sheets 20 x 30 inches.

"Stock: Not less than 70 per cent of the total fiber shall be ground wood; the remainder shall be unbleached sulphite.

"Finish: The average of 5 tests in machine direction and 5 tests in cross direction on both sides moving the paper after each test, made with the Ingersoll Glarimeter, shall be not more than 50 per cent Gloss.

"Ash: Shall be not more than 2 per cent.

"Degree of Sizing: Time of transudation of water shall be not more than 10 seconds by the Ground Glass method or 5 seconds by the alternate methods."

The article on the Free List having been defined, the committee deemed it wise to suggest a definition of dutiable printing paper—such definition to be inserted in Paragraph 1301, which would then read as follows:

"Uncoated papers commonly or commercially known as book paper, and all uncoated printing paper not specially provided for, not including cover paper, one-fourth of 1 cent per pound and 15 per centum ad valorem; uncoated printing paper composed wholly or partly of rag fiber, 3 cents per pound and 15 per centum ad valorem: Provided, That if any paper shall contain bleached chemical pulp (whether manufactured by sulphite, soda, sulphate, or modified, or other cooking process), or if out of the total fiber content of any paper more than 30 per centum shall be unbleached sulphite, or if the weight of any paper (of which unbleached sulphite shall be less than 30 per centum of the total fiber content) is less than 30 pounds or more than 35 pounds per ream of 500 sheets, on the basis of 24 by 36 inches, or if the average thickness is less than three one-thousandths or more than four one-thousandths of an inch, or if such paper shall be in rolls less than 16 inches wide and less than 28 inches in diameter, or shall be in sheets less than 20 by 30 inches in dimension, or if such paper contains any ingredients whereby the rate of water penetration as determined by the copper-plate method for running size tests with the Valley size tester is greater than three seconds, or the finish (as determined by an average of 10 tests, five on each side of the sheet, tests to be made at distances of at least 1 square inch apart and made with the Ingersoll glarimeter) shall exceed 47 per centum gloss, all such paper shall be dutiable at not less than one-fourth of 1 cent per pound and 15 per centum ad valorem."

This definition was prepared with a great deal of care and in such a way as not to encroach at all upon the definition of the free article as defined by the Treasury Department, it being supposed by the committee that there would be no change in the Free List.

The General Tariff Committee of the American Paper and Pulp Association did not appear upon the hearings on the Free List. On or about February 23, 1929, the publishers filed a brief with the Ways and Means Committee requesting the insertion of a substitute for Paragraph 1672, such substitute to read as follows: "Printing Paper, excepting rotogravure paper, for use in the manufacture of newspapers."

Thereafter and on March 9 the General Tariff Committee and the manufacturers of book paper filed a brief with the Ways and Means Committee opposing the substitute suggested by the publishers.

The Chairmen of the Sub-Committee on the Free List and the Sub-Committee on the Paper Schedule asked the American Newspaper Publishers Association and the American Paper and Pulp Association to meet. Two meetings were had. The American Paper and Pulp Association insisted upon the definition theretofore proposed by them.

After some discussion the publishers suggested the following as a substitute for Paragraph 1672: "Machine finished paper commercially known as news print, except paper commercially or commonly known as rotogravure paper, for use in the manufacture of newspapers."

Thereafter the committees of the American Newspaper Publishers Association and the American Paper and Pulp Association met with the committees on the Free List and on the Paper Schedule. The publishers stated that they had no objection to the suggested substitute for Paragraph 1301, as proposed by the American Paper and Pulp Association.

The publishers did not agree to or sponsor the suggested substitute for Paragraph 1301, containing the definition, proposed by the General Tariff Committee of the American Paper and Pulp Association—they merely took the position they would not oppose the paragraph proposed by the committee.

On the other hand, the General Tariff Committee of the American Paper and Pulp Association did not agree to and did not sponsor the proposed substitute for Paragraph 1672 suggested by the publishers—the committee merely took the position they would not oppose the insertion of such proposed substitute in the new Tariff Act.

While the suggested definition of dutiable printing paper to be inserted in Paragraph 1301 apparently protects the domestic manu-

facturer, there does seem to be a loop-hole for the admission of paper at present dutiable, in the proposed substitute for Paragraph 1672 suggested by the publishers, which the General Tariff Committee of the American Paper and Pulp Association state they will not oppose, more especially as the suggested substitute for Paragraph 1301 only covers "uncoated papers commonly or commercially known as book paper, and all uncoated printing paper not specially provided for, not including cover paper."

Under the definition proposed by the publishers to be inserted in Paragraph 1672, and not opposed by the General Tariff Committee of the American Paper and Pulp Association, the United States Customs Court may take the view that all paper used by newspapers regardless of quantity of clay, of finish, sizing and weight, so long as not super calendered, are entitled to free entry, and it behooves the General Tariff Committee to watch this situation very carefully for fear the last shred of protection that the United States news print manufacturers now possess is not taken away.

This situation is all the more important as attempts have been made in various quarters from time to time in the past, and will no doubt be repeated in the future, to have book papers placed on the free list. In this connection it may be mentioned that in the most recent grants of timber limits made to paper manufacturers in Canada, the Provincial Governments have required that wood cut on Crown Lands shall be made into paper, whereas formerly permission was given to make the wood into pulp or paper. Canadian manufacturers have already intimated that all paper made from wood should be admitted into the United States market free of charge.

Poster News Held Dutiable

WASHINGTON, D. C., May 6, 1929.—The definition of standard news print paper as set forth by the Treasury Department has been upheld in a decision just handed down by the United States Court of Customs Appeals in the case of the United States against the James P. Heffernan Paper Company. The case reached the Court of Appeals from the United States Customs Court.

The Court of Appeals has upheld the collector of the port when he assessed certain news print paper coming into the country at a rate of ¼ cent per pound and 10 per cent ad valorem under paragraph 1301 of the Tariff Act on the ground that it was not standard news print paper under the meaning of the definition.

The opinion was rendered by Associate Judge Bland. In this case certain paper was assessed as printing paper at the rate named above. The importer protested that it was properly free of duty as standard news print paper. The United States Customs Court sustained the protest as to certain items and overruled it as to all others. Their judgment has been modified in this decision, being reversed as to that portion which sustained the importer's protest and affirmed in all other respects.

"Under admitted facts in this case", says the Court, "the importation in controversy was not shown to have been chiefly used for printing of newspapers and the collector's classification of the paper was not shown to have been incorrect." The collector held that the imported printing paper was not made in accordance with the Government definition of standard news print paper.

Buys Western Pacific Paper Co.

LOS ANGELES, Cal., May 3, 1929.—The General Paper Company has purchased the entire interests of the Western Pacific Paper Company of Los Angeles, and on and after May 1 will be known and operated as the General Paper Company of Los Angeles.

Program of Interstate Meeting

The Paper Technologists Club and the Kalamazoo Division of the Cost Association will unite on May 17 and 18 in holding a group of meetings at the Park American Hotel in Kalamazoo, Michigan. As was the practice last year every interested technical or cost man is invited.

Registration will begin at 10 A. M. on May 17 and a joint luncheon with Harry Bradford of the Rex Paper Company, presiding will officially open the meetings. At the luncheon Mayor E. M. Kennedy, N. J. Cowie and C. B. Barton, Jr., will be the speakers.

On Friday afternoon there will be cost and sectional meetings. George K. Ferguson will preside at the former meeting at which two papers will be read:

"Insurance," by Rep. James M. Wilson.

"Time as a Cost Factor in the Paper Industry," by T. J. Burke.

The technical meeting will have E. F. Whittington as chairman and the following papers will be presented:

"Pulp Evaluation and Its Adaptability to Paper Making," by O. P. Gephart.

"Detection of Starch, Gum, Glue and Casein in Paper," by Th. C. Bentzen.

On Friday evening N. J. Cowie will preside and E. J. Turner will act as toastmaster at an informal banquet at the Park American Hotel. The principal speaker will be Robert B. Wolf of New York.

Saturday morning will be devoted to golf or mill visits. At noon Arthur Dreshfield will preside at a luncheon at which Ivan Lundbeck of the Thilmany Pulp and Paper Company will give a talk on "Recent Observations on Scandinavian Pulp Manufacture."

Sectional, Cost and Technical meetings will be held in the afternoon. Frank Brown will preside at the Cost session and there will be papers presented:

"Standard Costs," by H. E. Parkman.

"Rejuvenation of Cost Figuring by Means of Time Study Data," by Herbert S. Davy.

In the technical meeting the following papers will be read:

"Notes on Analytical Paper Microscopy," by K. P. Goehegan.

"Wood Pulps of Today," by N. L. Nourse.

Round table Discussion on Question Box.

The meeting will be closed with a dinner presided over by Charles B. Barton, Jr. E. B. Milham will be toastmaster and the speaker will be Dr. John W. Dunning.

Last year the meetings were interesting, instructive and well attended. It is hoped that even a larger group of cost and technical men will avail themselves of this opportunity this year.

Sutherland Paper Co. Pays Dividend

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., May 6, 1929.—Sutherland Paper Company has paid its regular quarterly dividend of 30 cents a share on the 300,000 ten dollar par shares now outstanding, which is on the basis of 12 percent per annum. Fred. W. Sutherland, secretary, reports the company's business is heavy. The four board machines in the Sutherland and Standard divisions are running 24 hours daily, while the box plant at the Standard division is now operating on a full day and night schedule.

"We have been able to increase operations in our Standard converting plant," said Sutherland, "so that we are now consuming daily 80 tons of board, where in the past we handled 30 tons a day. We have completely re-arranged our schedule in that unit and materially added to our equipment. We have ordered a large four color press, which will be installed in July and still further increase our output."

L. W. Sutherland, president of the company, who has been undergoing a course of treatment for some time at the Sanitarium in Battle Creek, is now able to spend a portion of each day in his office and seems well on the road to complete recovery.

One of Our Georgia Bauxite Operations

The KALBFLEISCH CHEMICALS & SERVICE for PAPER

EVEN to mining our own B-A-U-X-I-T-E

Bauxite Steamer Loading at one of our Dutch Guiana Properties

TO give paper attractive whiteness look further than the trees that furnish the pulp. Go to the Bauxite mines, where Sulphate of Alumina principally originates.

We accord Bauxite its full importance. To assure first quality Bauxite containing a maximum of aluminum oxide and a minimum of silica and iron—we operate our own deposits. So Kalbfleisch Sulphate of Alumina is a white product, containing much less than the minimum allowed quantity of iron.

In Georgia, Tennessee and South America our Bauxite mines contribute to the quality of this Kalbfleisch paper chemical. It is a satisfactory policy for our customers, assuring them of a surpassingly excellent grade of Sulphate of Alumina.

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ERIE, PA.
KALAMAZOO, MICH.
CHATTANOOGA, TENN.

Plants:
ELIZABETH, N. J.
WATERBURY, CONN.
DE QUINCY, LA.

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Chromium-Nickel Alloys for Sulphite Equipment*

By Lee Wallis Gibbons[1]

Everyone familiar with the production of sulphite paper pulp is, I believe, familiar with the great interest that has developed in recent years in the applications of the high chrome high-nickel alloys in connection with the sulphite processes. The advance in this interest has been tremendous during the last twelve months as alloys of this nature have shown their worth under actual operating conditions.

Laboratory Tests Confirmed

Examination of equipment made from these alloys has confirmed the laboratory tests which indicated that these alloys would greatly outlast materials that have ordinarily been employed for resisting the corrosive action of the solutions used and the gases produced in the process.

As is the case in any new development, not all of the equipment has proven satisfactory and there has been some hesitation, even on the part of those who have been most convinced, to consider these alloys a panacea for the ills of the sulphite digester and its accessories. Failures, where such have occurred, are probably due to imperfections in the alloy or imperfections in the rolling, to treatment of the alloys, or imperfection in the equipment made of these alloys. The indications are that it is not the metal itself which is at fault so much as a misunderstanding of the properties of metals of this composition, and it will be part of my purpose in this paper to point out to you some of the salient characteristics of these metals and to give you suggestions as to how to secure the most satisfactory equipment through a better understanding of the limitations of metals of this description.

It will also be my purpose to describe to you what is available in the way of fabricated articles and to show you some of the methods of construction and discuss their relative merits.

I do not believe there is any need for me to suggest the points of application. They will occur to all those familiar with the sulphite mill. In a general way, wherever the so-called sulphite bronzes, lead and copper are now being used, these alloys are applicable. It may interest you to know that nails of all descriptions from small nails to big spikes have been produced and are available, and that these alloys have been used for tie rods on storage tanks.

Claims for Alloys

Between applications of this nature including the possible construction of the digester itself these alloys have a wide application. The nature of the alloy which has found most favor and which has been most widely available has been an alloy containing approximately 18 per cent chromium and 8 per cent nickel. Standard alloys of this general analysis that vary only slightly in the range of chromium and nickel content and only slightly in the range of carbon content are made by a number of the large steel companies in this country and abroad. Various companies claim advantages for their particular alloys and those of you who are interested and have dealt with this subject will hear or have heard the various arguments. There is an advantage in having a considerable field of choice. Alloys containing greater proportions of chromium and nickel have shown satisfactory results but apparently no advantages sufficient to off-set their higher price. Claims have been made for alloys containing a percentage of molybdenum and some of those who have tested these materials are of the opinion that they have a distinct advantage. However, up to the present time alloys of this composition have not been widely available on this side of the Atlantic. We will therefore deal with the alloys of the 18 per cent chrome, 8 per cent nickel range and what I have to say about them will apply quite accurately to the other alloys mentioned.

Metals Having High Melting Point

We must first realize that in dealing with these alloys we are dealing with a combination of metals having a high melting point; production is only possible in an electric furnace and careful handling and careful control of the composition of the alloy is of the greatest importance.

The practice in the big steel companies who produce billets for rolled and forged material is to be very careful in manufacturing so that the products of any of the reputable companies are very likely to be satisfactory in analysis. There is more to be considered than analysis for the metals going to make up the alloy should be properly combined and failure in this respect may make a difference between success and failure in the use of the equipment.

* Presented at TAPPI Conference at Twelfth Exposition of Chemical Industries, Grand Central Palace, New York, May 8, 1929.
[1] Manufacturer's Representative, Graybar Building, New York.

Electric Furnace Products

The products of the electric furnace itself may be roughly divided as follows: rolled products (such as sheet, plate, strip, flat, round and hexagonal bars), forgings (seamless tubing), castings.

A subdivision of the first general headings is equipment fabricated from rolled stock including welded tubing. Fabrication from rolled stock may be either by riveting or welding each form of fabrication having its proponents.

It can be said generally that in fabrication of these alloys by riveting the material has no tendency to automatically tighten and correct leaks by oxidizing (which is rusting) as with carbon steel, and the caulked joints present only a thin layer of metal to resist corrosion as a protection against leaks. Of fabrication by welding it may be said that unless welding is performed with the greatest care there are dangers of porous welds and also of imparting physical strains to the adjoining metal which may be fatal to its resistance to corrosion. The chrome alloys with a comparatively high percentage of nickel such as those under discussion are quite amenable to welding and in Germany, where these alloys are extensively used practically all fabrication is done by welding. Welds in these alloys when properly made are ductile and have a tensile strength comparable to the rolled product itself. There are many applications in the sulphite mill for fabricated equipment. Failures with either form of fabrication should not be a source of discouragement but a reason for investigation.

Blow-off Lines

Welded or riveted pipe should be entirely suitable for blow-off lines from the digester. Owing to the high tensile strength of these alloys in rolled form, the present very heavy construction can be avoided. Blow-off pipes of this construction have never been tried to my knowledge owing to a sentiment in favor of seamless or cast construction. This I feel convinced is a groundless fear as many tensile tests have been made on butt welds that have shown over 95,000 pounds across the weld. In cases of this kind welding would appear to be a better construction than riveting since it is not subject to the shearing stresses of the riveted work resulting in a lower factor of safety. This construction would result in a blow-off pipe that would be tough and not so liable to fracture as a cast pipe.

Piping and Tubing

Equipment of this class may be roughly divided into sizes above 5½ inches O.D. which must be made either by welding or riveting (although tubing in sizes larger than 5½ inches O.D. are being produced in Germany). Tubing 5½ inch O.D. and smaller may be either seamless or welded and seamless tube may be either hot rolled, or hot rolled and subsequently cold drawn. Hot rolled sizes are the larger sizes having a high limit of 5½ inches O.D. and a low limit of 1.9 inches O.D. Smaller sizes than 1.9 inches O.D., in seamless tubing are cold drawn. These alloy tubes are available in practically all the sizes in which the straight carbon steel tubes are manufactured. This includes all the standard pipe sizes as well as considerably lighter and heavier gauges. Welded tubing if properly made gives excellent service and has the advantage of being much cheaper in the lighter gauges of wall thickness. It is not available in the heavy gauges owing to difficulties in forming. Its applications are obvious.

Forgings

Forgings made from these alloys if handled at the proper temperatures are sound and dense and give excellent service. They are particularly adaptable for seats and discs in large valves and for VanStone rings as well as for various parts of pumps.

Other applications will occur readily as these alloys are capable of being forged in many shapes and forms.

Castings

This is one of the most important forms in which these alloys have applications in the sulphite process. Fittings of all sorts, valves and pumps are practical only in cast form and while it is the most important form of the alloys in many respects, it is probably the least understood. Heats for cast material are made on a much smaller scale indeed than for the ingots from which rolled products are subsequently produced. The metal is never poured in large batches with the result that the temperatures at which it is poured vary during the pouring of each heat and the temperature control is absolutely essential for the production of sound and uniform castings. Proper molding is of the utmost importance as is the case with steel castings of any description and the carbon content is a matter that should be carefully specified by the buyer and carefully controlled by the foundry. In rolled products in these alloys the carbon is usually kept at about .12 per cent although some of the mills permit a higher carbon and others advocate and claim advantages for a carbon content as low as .07 per cent. The carbon content no doubt makes a difference in the ductility of the metal and the consequent quality of the finished product, but is probably not a controlling factor. Castings, however, are not subjected to subsequent hot or cold working and with castings of a carbon content as low as that usually found in the rolled material are likely to be of a large crystalline structure and porous. Probably the ideal carbon content for casting work is between 25 and 35 per cent and should be so specified. The heat at which a casting is poured has an important effect on the quality of the resulting casting and unless carefully watched may result in castings of uneven structure and possibly of uneven analysis.

All castings should be subjected to hydrostatic pressure tests before and after being machined. If castings are carefully specified and inspected many of the adverse results which are obtained could be readily avoided.

Crystallization of Castings

We have not time in this paper to go deeply into the metallurgy of these alloys but some of their peculiarities are worth considering here. The 18 per cent chromium, 8 per cent nickel alloys are rapidly work hardening when they are worked cold. If properly proportioned alloys are austenitic but with much cold working their austenitic properties and examination under the microscope discloses alterations in the crystalline structure of the metal with the development of larger crystals having the appearance of minute deposits of some unknown substance between crystals. Metallurgists are not agreed as to whether this is a carbide or a graphitic carbon but metal of this structure is much less resistant to corrosion. By proper treatment the proper crystalline structure can be restored as well as the austenitic properties of the metal. It is important therefore that these qualities and characteristics should receive consideration in the construction of any equipment to resist corrosion and the amount of mechanical work that is permissible should be taken into consideration.

If these alloys are to be handled and bent or fabricated hot, work should not be done on them in the range between 1300 and 1900 deg. F. but should be done either below or above these temperatures. The applications for pipe are very considerable in and around sulphite digesters.

Various Forms of Pipe Connections

I will mention before closing various forms of pipe connections. The standard threaded connection is well known but has disadvantages. Probably the best form of construction is flanged connections and these may be made in four different ways, either by turning up a VanStone joint on the tube itself which should only be done by those skilled in this work, by welding on a forged VanStone ring, by welding on a forged flange or by expanding the tube into a forged flange. All these methods of construction if properly done are satisfactory. Probably the two best forms are the welded on forged VanStone rings or the expanded on forged flange. The last form of operation is one that has been adopted

by some of the biggest ompanies handling chemicals and lends itself admirably to work in the field. Special expansion machines can be procured at reasonable prices to handle each size of pipe required for this work. Equipment available in these 18 per cent chrome, 8 per cent nickel includes nuts, bolts, nails, all kinds of valves, large pumps, etc. There is nothing about these alloys that prevents any part of the metal equipment of a sulphite mill from being made from them except perhaps the cost. This, however, can only be a controlling factor when we reach a piece of apparatus as large as the digester itself which would obviously be extremely expensive if made of the solid alloy. Considerable work has been done on the problem of lining the carbon steel shell with chrome nickel. To make this practical something must be worked out to take care of the difference in coefficient of expansion between the chrome nickel alloy and the carbon steel, the alloy having a very much higher coefficient of expansion. Considerable work has been done on this and it is now claimed that a practical method has been devised for taking care of the longitudinal and circumferential expansion of such a liner.

In the Sulphite Mills

To the writer's knowledge chromium-nickel alloy equipment in the sulphite mills has been made for the following purposes: tie rods for sulphite liquor storage tanks, tank outlets, piping from storage tanks, pumps, all equipment for circulating systems on sulphite digesters, strainers of various types, relief lines, relief valves, steam lines to digesters, tubing for various types of coolers and fittings, valves, including return bends for pipe lines and cooler coils, blow-off elbows, blow-off fittings, seats and discs for blow-off valves, blow-off pipes, target plates, nails, blow-off pits. All this equipment has been fabricated successfully and it is standing up well under service conditions.

Industrial Expansion in New York

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., May 4, 1929.—In an address before a large gathering of representativ[illegible]s and business men of Northern New York, Mark [illegible]ng president of the Chamber of Commerce, dwelt on [illegible]xpansion. Mr. Fenton is industrial agent for several railroads and organizations in addition to being the author of a number of industrial books. His address in part follows:

"Most cities in the country are interested in the securing of industrial expansion. Widening markets and the necessity of new raw material sources account for decentralization of industry which is going forward at an increased rate. A relatively small per cent of industrial plants are where they are today because of industrial advantages. Accident placed them and inertia held them where they are up to the present time. Pressure of competition is changing all this. All this is a question of factories locating from chance to logical selection. Fair prospective profits will interest capital to any locality. All lies in placing units in new and increasing markets and successfully combating keen activity of foreign competition in efforts to regain pre-war markets. In connection with the astounding expansion program it is essential for industries to take advantage of every possible production cost cutting factor, one of major proportions being plant location. This means in the next few years that a considerable sum will be spent in establishment of industries in new localities. There is a legitimate field in every city to engage in industrial expansion program and methods. Results through the medium of an inventory of assets disclose definitely what class of industries could operate advantageously in the city in question, this to be followed by intelligent and persistent salesmanship."

Mr. Fenton also touched on the financial angle of industrial expansion. He stated that the practices of giving bonuses, stock selling and of giving endorsements in the interest of securing new industries was unsafe for any organization, had no advantages, and the practice was being eliminated.

"Charge Grading" of Rosin Unreliable

The Food, Drug, and Insecticide Administration, which is charged with the enforcement of the Naval Stores Act, has recently obtained evidence of the shipment of much badly misgraded rosin from certain points of production. Investigation shows that one of the principal reasons for this misgrading is the fact that the rosin was graded by charges, that is, by means of "charge" or "vat" samples, instead of by the prescribed method of spiking and cutting a sample from each barrel. The administration has on numerous occasions looked into this matter of "charge grading." Its findings and conclusions are that a sample of rosin taken from the vat or barrel while the rosin is still in a molten condition may not represent the true and correct grade of the rosin after it has cooled and solidified in the barrel and is ready for shipment. The rosin is generally definitely darker after it has cooled and solidified in the barrel than it is when in the vat or molten in the barrel.

Experiments in the laboratory have shown that when a WW rosin, slightly lighter in color than the WW standard, was melted in a porcelain vessel in an oil bath kept at 150° C. it darkened to WG after 20 minutes, to N after 1 hour, and to M after 2 hours. While all rosins do not darken at the same rate, the fact remains that rosin in a full barrel does darken more during cooling than a small sample of the same rosin cooled quickly. Numerous comparisons of the color of a regularly spiked and cut sample with the color of a vat sample of the same rosin have shown conclusively that the cut sample from the barrel is almost always darker than the molded vat sample.

In view of these facts, the Food, Drug, and Insecticide Administration hereby gives notice to producers and inspectors that rosin cannot be graded accurately by means of "charge" or "vat" samples but should be graded by individually spiking to the required depth and sampling each barrel after the rosin has cooled sufficiently. The shipment of improperly graded "mixed pack rosin" or opaque rosin can also be largely avoided in this way. Effective May 1, 1929, the Food, Drug, and Insecticide Administration will consider the sale of any misgraded rosin which has been charge graded as a violation of the Naval Stores Act.

TAPPI Members Change Positions

Dr. E. B. Johnson who was instructor in the chemistry department of Cornell University is now director of the chemical department of the Columbian Rope Company at Auburn, N. Y.

V. V. Fishburn has been transferred from the Chicago to the Freeport, Ill., laboratory of the C. F. Burgess Laboratories.

Vernon Woodside, formerly student at the New York State College of Forestry at Syracuse has taken a position as chemist with the Foster Boxboard Company of Utica, N. Y.

H. D. Eliason, formerly vice president of the Central Paper Company of Muskegon, Mich., is now with the Detroit Sulphite Pulp and Paper Company at Detroit.

D. S. Davis, chemical engineer at the Bureau of Tests of the International Paper Company at Glens Falls, N. Y., is to become chief chemist of the Manayunk, Pa., plant of the Container Corporation of America.

Start Wrapping Machine at Hudson River Plant

[FROM OUR REGULAR CORRESPONDENT]

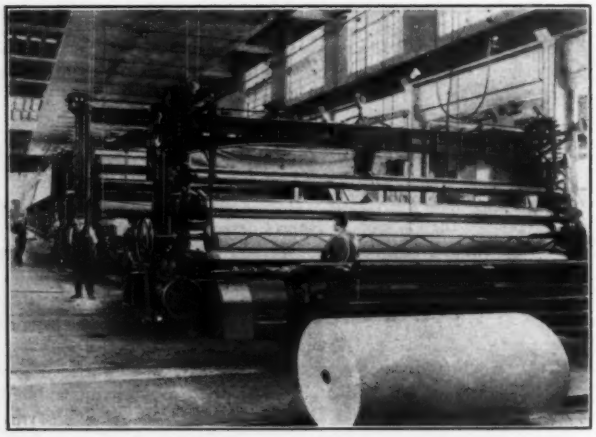
CORINTH, N. Y., May 4, 1929.—The wrapper machine of the Hudson River plant of the International Paper Company resumed operations during the past week after a two weeks' layoff due to overproduction. Night and day shift forces of employees have resumed their work in the department. The machine is better known to employees as Number 10, the last numbered machine in the plant.

All ten paper machines at the local plant are now in operation and considerable paper is being shipped daily. The mill is now operating at capacity in virtually all departments with some departments specializing in various makes of paper.

The Importance of Better Rolls Rapidly Becoming Evident

For many years a considerable amount of loss and waste was looked for in the pressrooms. The paper machines, and the equipment handling the raw material and the stock up to the machines, underwent many changes, looking toward labor saving, economy of materials, greater production, and a better sheet; but after the paper was wound on the reel, the treatment received from there on was pretty much as it had been for many years; it was slit, and wound into rolls for the pressroom, and the pressman used them and made no particular complaint, if the rolls were about as good as the average, or, in other words, about the same as he had used for years before.

Such rolls were very apt to be soft at the center, because the winders in use were most likely to produce rolls with the sheet wound more or less loosely around the core, and wound progressively harder toward the outside. This meant that the outside turns might be wound so tightly that a slight change in atmospheric moisture, or a slight nick or blow, would cause the outside turns to split lengthwise of the roll. The extreme tension could cause the roll to become "out-of-round," or "starred" or have a flat, or some other defect which would quickly cause trouble when unwinding. Even if the roll reached the press in such shape that it would unwind moderately well down near the center, the loose core was almost certain to cause trouble; was, in fact, rather expected not to unwind and run through the press without a break, and the core with a core waste of perhaps ½ inch or, more likely one inch or more of paper was removed and this core



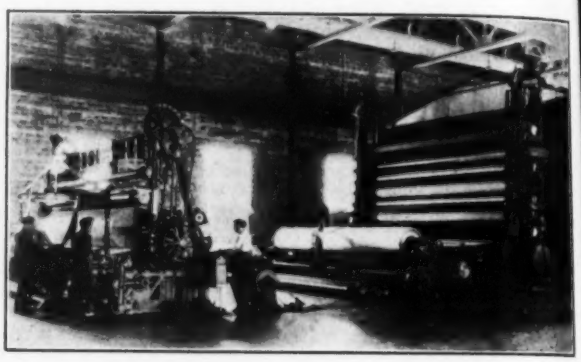
INSTALLATION AT GATINEAU, P. Q.
Camachine 20 winder recently installed in the mill of the International Paper Co. This machine is 266 inches wide.

waste either actually wasted or reclaimed by converting into a less valuable product.

Full Rolls Desired

Under modern conditions, with rolls of print paper increasing in cost and in quantity consumed, and the trend to effect saving wherever possible, and cut down unnecessary waste and expense, demand gradually started and grew at an accelerating rate, for rolls as large as practicable, with as much paper as could be wound into a roll, and so wound and delivered, or in fact mounted on the press, as to enable using every pound possible, right down to the cores.

A news print mill, say a four machine mill with the most modern paper machines, turning out 500 tons or 600 tons per day, ships a tremendous tonnage, when looked at only as so many tons; but this daily output also bulks very large and calls for a fair sized train of cars daily, and all of this paper usually must be moved by truck through city streets to the pressroom which is usually located in a part of the city where the streets are congested with traffic and where space is very costly. All of this demands that the paper be put up at the mill in such shape that it occupies a minimum amount of space per ton, that it will handle with the least possible damage enroute from the mill to



INSTALLATION AT TUSCALOOSA, ALA.
Winder recently installed at the new Kraft paper mill of the Gulf States Paper Corp. This machine has a drum face 222 inches wide with a 60-inch rewind.

the pressroom, and that it will unwind on the presses with a minimum loss of paper from defects in paper or rolls, and with core waste reduced to a negligible amount.

Referring to the core waste, whereas not long ago this could actually be one inch or more of paper on the radius, or in thickness around the core, nowadays there is a demand in at least one pressroom where the standard of roll quality has been raised, of a core waste not to exceed one-twentieth of one per cent of the paper in the roll. This means a core waste not to exceed about twenty turns of paper around the core.

With the increasing press speeds, a point has now been reached where the paper unwinds through the press at about the same speed it is wound up on the winder. When the paper is made on the machine, at, say 1,000 feet per minute, the winder operates at about 2,500 feet to 3,000 feet per minute; and such a speed is approached on a modern high speed newspaper press printing, on one press, something like 60,000 papers per hour, or 1,000 papers per minute. Such a speed calls not only for a first class sheet of news print, but also for a roll as nearly perfect as possible, so that it can be unwound with a minimum of breaks (each of which would shut down the press) and with a maximum number of feet per roll, to enable running the press as long as possible without a shut down. This calls for unwinding down to the core as closely as possible; for a firm, hard wound, unevenly tensioned roll throughout, from start to finish; and for a large diameter roll.

Thirty Six Such Rolls

As for the last requirement, it is of interest to note that for a long time a standard roll of news print has been about 34 inches diameter; recently there has been a call for rolls about 36 inches or 36½ inches in diameter; and one speaker at the American Society of Mechanical Engineers meeting in New York on February 7, speaking on the subject of news rolls, called for a diameter of about 40 inches, saying the trend of the times, and the pressroom requirements, for various good reasons, called for larger sized

rolls. It may be noted that a roll 40 inches in diameter, if wound uniformly hard, will contain about 22 per cent more paper than a roll 36 inches diameter.

What might be called the standard old fashioned and up to within the past few years the up-to-date- winder, with slitters mounted some distance at the rear, and the sheet threaded up between the drums, served fairly well to meet the requirements, when presses ran at slow speeds; the size of the news paper was small, and the number of copies counted in the thousands. A change has come to pass, however, it might perhaps be said within a few years; and now it is recognized that the winder is indeed an important feature of the paper machine room equipment.

High Speed and Wide Winders

A winder which meets the requirements indicated, as regards the production of news print rolls satisfactory for the pressman, has been developed within the past few years with special regard to the winding of news print and book papers at high speed.

A recent installation of a Cameron winder of 147 inches rated width, or two-roll width, was made on one of the paper machines of the Great Northern Paper Company at Millinocket, Maine. The critical comparison made in the pressroom between rolls from this trial winder and rolls coming from other winders, possibly from other mills, showed surprising results, as reported from the pressroom staff.

Other recent installations of these winders include a number for the Fraser Paper Company at Madawaska, Maine, winding sulphite bond; Kalamazoo Vegetable Parchment Company; three at the mill of the Minnesota and Ontario Paper Company at International Falls, Minn.; and a winder for the news machine at the Sturgeon Falls mill of the Abitibi Power and Paper Company, Ltd.

A recent installation of one of these winders has been at the Anglo-Newfoundland Development Company mill at Grand Falls, Newfoundland. Another which was placed in operation within the past few months is a 217-inch winder on the new Pusey & Jones catalogue paper machine at the Fraser Paper Company in Madawaska, Me.

As indicating the trend toward larger diameter rolls it may be noted that the Gulf State Paper Corporation, in providing the winder for its new Beloit machine at their new mill at Tuscaloosa, Ala., have installed a 22-inch drum face width Cameron winder build to wind rolls 60 inches in diameter, which is believed to be a record in diameter for a machine of this width.

New Tappi Members

William Adamson, technical director, Charles Walmsley & Co., Bury, Lancashire, England.

Albert Ahlin, director, Sverigas Papersbruksfoerbund, Blasieholmsgaten 1, Stockholm, Sweden.

J. Ronald Atwater, student, N. Y. S. College of Forestry.

John Bellows, chief of the Bureau of Tests, Parker-Young Company, Lincoln, N. H.

T. A. Cape, superintendent, Champion Coated Paper Company, Hamilton, Ohio.

R. M. Cobb, research chemist, Lowe Paper Company, Ridgefield, N. J.

F. H. Cole, sales engineer, Walworth Company, 51 E. 42nd street, New York, N. Y.

E. H. Colesworthy, manager of chemical and research laboratory, Union Bag & Paper Corp., Hudson Falls, N. Y.

H. D. Crandon, student, University of Maine, Orono, Maine.

A. P. Costigane, consulting engineer, Ontario Paper and Pulp Makers Safety Association, Toronto, Ontario.

P. B. Davidson, industrial fellow, Mellon Institute of Industrial Research, Pittsburgh, Pa.

R. H. Doughty, assistant chemical engineer, Forest Products Laboratory, Madison, Wis.

K. A. Forrest, manager of pulp and paper mill equipment section, Swenson Evaporator Company, Harvey, Ill.

E. G. Goodell, vice president and manager, Stevens Point Pulp and Paper Company, Stevens Point, Wis.

W. G. Hendrich, chemist, Collins Manufacturing Company, North Wilbraham, Mass.

Gordon W. Hughes, assistant to vice president, Inland Lime & Stone Co., Manistique, Mich.

B. I. Humble, chief chemist, Hylte Bruks A/B, Hyltebruk, Sweden.

W. A. Ketchen, chemist, Fraser Companies Ltd., Madawaska, Me.

J. F. Keyes, chemist, Cherry River Paper Company, Richwood, W. Va.

James A. Lee, assistant editor, Chemical and Metallurgical Engineering, Tenth Avenue at 36th Street, New York, N. Y.

R. F. Lyon, assistant in laboratory, Marathon Paper Mills Company, Rothschild, Wis.

C. E. Macklem, salesman and engineer, Beloit Iron Works, Beloit, Wis.

Major Renold Marx, consulting engineer, 133 Finsbury Pavement, London E. C. 2, England.

Lewis L. McKay, assistant chemist, Culter Mills Paper Co., Peterculter, Aberdeenshire, Scotland.

H. D. Mitchell, sales engineer, Link Belt Co., Philadelphia, Pa.

D. C. Murchison, salesman, R. T. Vanderbilt Co., 230 Park avenue, New York City.

H. A. E. Nilsson, president, Kopparberg & Hofors Sagwerk A/B, Ockelbo, Sweden.

T. D. Nuttall, managing director, Bentley & Jackson Ltd., Bury, Lancashire, England.

Aron Ormell, chemical engineer, Kramfors A/B, Kramfors, Sweden.

Spencer Otis, Jr., vice president, Locomotive Terminal Improvement Company, 80 E. Jackson Blvd., Chicago, Ill.

Theodore Overwien, chief chemist, Ranheim's Paperfabrik, Ranheim, Norway.

R. A. Packard, plant engineer, Smith Paper Company, Lee, Mass.

D. K. Pattillo, director, pulp and paper process department, National Aluminate Corporation, 6216 W. 66th Place, Chicago, Ill.

H. G. Rappolt, engineer, J. O. Ross Engineering Corporation, 122 W. 42nd street, New York, N. Y.

A. D. Richetta, mechanical engineer, Hoberg Paper and Fibre Company, Green Bay, Wis.

W. A. Ritchie, chemist, Marathon Paper Mills Company, Rothschild, Wis.

John Seddon, managing director, East Lancashire Paper Mill Company, Radcliffe, England.

J. Martin Sundell, mechanical engineer, Hospitalsgaten 15, Norrkoping, Sweden.

E. G. Thompson, chemist, Crown Willamette Paper Company, Camas, Wash.

R. Trautschold, power engineer consultant, Box 376, Pompton Plains, N. J.

C. R. Whipple, sales engineer, Beloit Iron Works, Beloit, Wis.

Same Wage Scale To Continue at Hudson Falls

HUDSON FALLS, N. Y., April 29, 1929.—Following a conference in the new bag factory auditorium of the Union Bag and Paper Corporation between officials of the firm and representatives of the International Brotherhood of Papermakers it was announced that the same wage scale which was in effect during the last year had been adopted. The meeting lasted four hours and was satisfactory to both the officials and the labor representatives relative to the man recently discharged by the corporation. A number of these employees will not be returned to the old positions due to the fact that some of their positions have been eliminated but it was announced that they would be given other jobs.

Action of Sulphite Liquor Upon Douglas Fir*

By W. L. Beuschlein[1]

The ever increasing demand for pulp and paper has caused a marked expansion in the utilization of raw materials and the development of processes. The Pacific coast forests with their stands of spruce, hemlock and Douglas fir offer inducements to the manufacturers of pulp. These woods with the exception of Douglas fir find ready use in the sulphite process. Douglas fir has not been used due to the difficulty in cooking and subsequent bleaching. Fir cellulose or pulp has been found to contain uncooked slivers and dark spots which have been attributed to the resins present in the original wood.

This work[2] was undertaken to determine whether or not the resins were the sole difficulty. Miller and Swanson[3] present data for the cooking of white spruce with sulphite liquor. Commercially, white spruce yields an easy bleaching pulp and is considered an admirable raw material. By using the method of Miller and Swanson, Douglas fir can be evaluated in terms of white spruce as a source of raw material for the sulphite process.

Outline of Experimental Work

Douglas fir was reduced to pass 60 mesh and the product retained upon the 100 mesh screen was bottled for use. Care was taken to identify the specimen and to remove knotty portions. The method of the Forest Products Laboratory at Madison, Wis., was used for the analysis of the wood.

Table I

Table 1 gives the composition of the Douglas fir used with those of other woods used in the sulphite process. The cellulose contents of the white spruce used by Miller and Swanson are similar to that of the Douglas fir used in this work. The samples were extracted with a 2:1 mixture of benzene and alcohol before placing in the experimental digester.

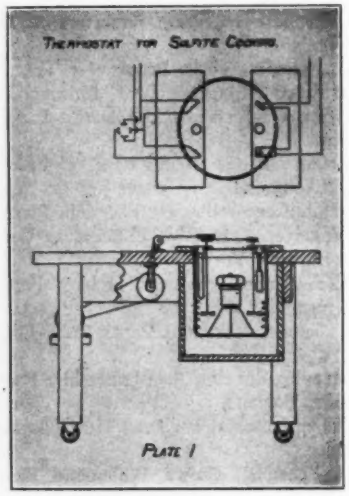


Fig. 1

TABLE 1
ANALYSIS OF WOOD *

Wood	U. of W. Douglas Fir	Schorger Douglas Fir	Schorger White Spruce	Miller & Swanson White Spruce
Ash	0.16%	0.38%	0.31%	
Cold water soluble	4.32	3.54	1.12	
Hot water soluble	5.05	6.50	2.14	
Ether extract	1.48	1.02	1.36	
Alkali soluble	12.61	16.11	11.57	
Benzine-Alcohol extraction	3.97			
Cellulose	59.30	61.47	61.85	57.80%
Lignin				30.36

* Percentages on oven dry basis at 105 deg. C.

The autoclave, Fig. 1, was an Illium "G" bomb manufactured by the Standard Calorimeter Company, of the same type as used for coal analyses except that a special flat cover fitted with an

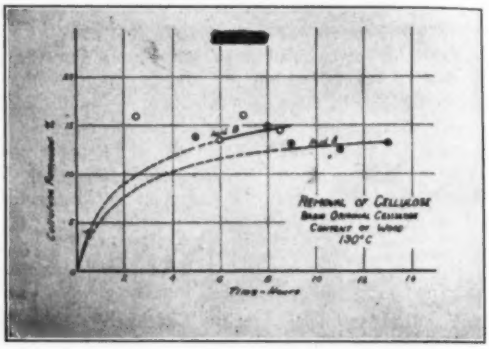


Fig. 2

Illium alloy thermometer well replaced the usual cover. The bath consisted of a heavily tinned flat bottomed soup kettle 13 inches deep by 12 inches in diameter, insulated with 3 inches of diatomaceous earth. Two vertical shafts with propellers circulated the Crisco which was used as the bath liquid. Two 600 watt Hotpoint hairpin type immersion heaters connected through a three-way switch supplied nearly sufficient energy to maintain the desired temperature. The residual energy was obtained through a deKhotinsky Bimetallic thermo-regulator from a 350 watt Hotpoint immersion type heater. A ¼ inch diameter copper coil, 14 feet long, for water and air, placed in the bath, permitted rapid cooling of the Crisco.

The cooking acids were made in liter quantities from stock solutions of sodium sulphite and sulphurous acid. Then stock solutions were analyzed just prior to use. After mixing and dilution, the mixture was again analyzed. Total SO_2 was determined by means of standard iodine and standard alkali with phenolphthalein was used for the free SO_2. The combined acid was obtained by difference.

Fifteen grams samples of the extracted wood were placed in the autoclave and 200 cc. of the acid added. The oil bath was brought 8 to 10 deg. C. above the desired temperature and the bomb immersed. The temperature was then dropped by running water through the cooling oil after which air was blown through to clear the coils of water. At the end of the cook, the autoclave was withdrawn and cooled with running water. The contents were transferred to a weighed filter paper in a Buchner funnel, washed with hot water, dried in air for 16 hours, oven dried for 5 hours at 105 deg. C., cooled in a dessicator and weighed. Samples were removed for the cellulose determination. Twenty-five cooks were made at the temperatures of 130, 140 and 150 deg. C. Two acid concentrations were used, one of 3.10 per cent and one of 3.99 per cent total SO_2. The results of the cooks are given 2, 3 and 4.

Discussion

In the curves, the percentage of cellulose removed has been plotted against the time of cook. At a constant temperature, the 4 per cent total SO_2 liquor removes cellulose much faster than does the 3 per cent SO_2 liquor. A rise in temperature of 10 deg. C. approximately doubles the rate of reaction. As time progresses for a given cook, the rate of removal decreases which indicates

* Presented by H. A. Hauff at the Pacific Coast Intersectional Meeting of the American Chemical Society, Pomona, California, June 15, 1928.

[1] Chemical Engineering Laboratory, University of Washington.

[2] The laboratory work was completed by H. A. Hauff, L. Dickinson, M. Masters, and M. D. Rogers as partial fulfillment for the degree of B.S. in Chemical Engineering, University of Washington.

[3] Paper Trade Journal: 61, 53 (1925).

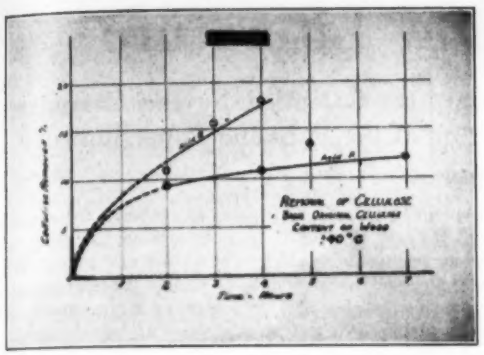


FIG. 3

that a part of the cellulose is more easily removed than that remaining. Similar results were obtained by Miller and Swanson. The results found by these authors on white spruce are compared with those of Douglas fir in Table 2.

TABLE 2

SPRUCE AND DOUGLAS FIR COOKS

Temp. deg. C.	Acid used	Time hours	Pulp yield per cent	Cellulose in pulp per cent	Wood used
130	A'	10.5	49.25	95.07	White spruce
130	A	11.0	67.40	80.20	Douglas fir
130	B'	7.0	48.18	96.13	White spruce
130	B	7.0	64.80	80.70	Douglas fir
140	A'	5.3	49.44	96.18	White spruce
140	A	5.0	68.30	78.10	Douglas fir
140	B'	3.3	49.70	95.08	White spruce
140	B	3.0	68.30	76.10	Douglas fir
150	A'	2.8	48.10	96.45	White spruce
150	A	3.0	69.90	76.10	Douglas fir
150	B'	2.0	49.15	96.20	White spruce
150	B	2.0	59.40	78.10	Douglas fir

COOKING ACID

Acid	A'	A	B'	B
Total SO_2	3.00	3.10	4.00	3.99
Free SO_2	2.00	2.05	3.00	3.03
Combined SO_2	1.00	1.05	1.00	0.96

Table 2

Cooks at a given temperature with the same acid concentration and for very similar periods of time give decidedly different pulps. While the two woods contain similar cellulose contents, Douglas fir shows much the less lignin and cellulose removal. If it is assumed that the two woods contain a common substance, cellulose, then Douglas fir contains a much more acid resistant lignin. The relatively slow reaction rate can not be said to depend upon resins, since this material has been removed before cooking. Douglas fir has a peculiar open cell structure which has been used for identification of this species. Such cell walls may contain a dense packing of lignin in which case the surface for a chemical reaction would be less than for a loose or less packed wall.

For equal conditions of time of cook, temperature, acid concentration and size of wood, for the range presented in this paper, resin-free Douglas fir yields a pulp much different from that of white spruce. The fir pulp is lower in percentage of cellulose although it retains more of the original cellulose, and it can be concluded that resin-free fir is more resistant to sulphite liquor than is white spruce. Perhaps this property has limited the use of fir commercially in the sulphite process.

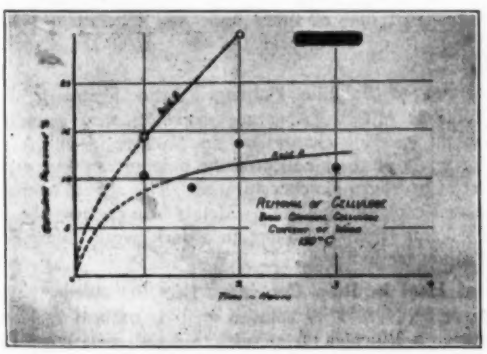


FIG. 4

TAPPI Scandinavian Fellow in Finland

John F. Ohlson, who has been studying pulp and paper manufacture in the mills of Sweden as a TAPPI Fellow of the American-Scandinavian Foundation, is now in Finland and has written the following interesting letter outlining his recent experiences.

A. B. Kemi,
Kemi, Finland, April 6, 1929.

Mr. R. G. Macdonald, Secretary,
Technical Association of the Pulp and Paper Industry,
New York City.

Dear Mr. Macdonald:

I am now at the world's most northerly pulp mill, "Kemi," a few miles below the Arctic Circle, after having spent a very profitable and enjoyable month visiting the newest and largest pulp mills in Finland. I will give you a short account of my trip.

Upon my arrival at Helsingfors I looked up Director Neovius, of the Finnish Cellulose Union, to whom I had one of your letters of introduction, and much to my astonishment, he arranged that I could see the best mills in the country as well as remain at said mills to my heart's content. Before I left the Finnish capital I visited the Finnish Central Laboratory and Doctor Bergman.

The first mill I visited was Kymene A/B, which with its three mills, is Europe's largest manufacturer of paper. I spent about five days at the three mills, old but constantly being kept up to date, and with a great amount of reconstruction and enlarging under progress. Then to Kaukas A/B, whose sulphite mill is the best run mill I have seen. Here I was five days together with a short visit to their sulphate mill which uses only saw mill waste. Then to Enso sulphite mill, supposed to be one of Europe's finest mills, where I spent five days including a trip of a few miles to Tornator, Mr. Lampen's mill. Warkaus mill was the next mill and this was really an excellent, modern mill, making news print. With this mill I was very favorably impressed, and spent a week here. You will no doubt hear from these people as they are very interested in this exchange of technical men. Mr. Ahlström is one of Finland's wealthiest men and he has donated much money for scholarships, etc. I can well recommend this mill, and now after a tortuous train ride, I am at Kemi. From here it will be down the Swedish coast, stopping off at several mills, there being at least one mill at the mouth of nearly all the larger rivers.

In all, the Finnish pulp mills impressed me as being well managed and up to date. In particular I noted a wonderful cooperation between all the mills, not only in their admirable selling policy but in technical management as well. And the courtesy and kindness shown to me was excellent, and such that I will long remember; at some of the mills I was treated as a guest for the entire period.

With kind regards,

Very sincerely,

JOHN F. OHLSON.

Oslo Reports Pulp Industry at Capacity

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 8, 1929.—A radiogram from Commercial Attache Lund, at Oslo, reports the paper and pulp industry operating at capacity. Most of the 1929 production has been sold. Prices are firm, and the mechanical groundwood mills expect better and more stable prices as a result of recent agreement between Norwegian, Finnish, and Swedish producers. Export sales of this commodity are to be on a quota basis, according to the terms of the agreement.

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Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Process for Heat and Liquor Recovery in the Sulphite Pulping Process. A. F. Richter and F. A. Augsbury assignors to Stebbins Engineering & Manufacturing Co. U. S. pat. 1,653,416 (Dec. 20, 1927). The relief gases and liquor and the spent liquor are collected under pressure in one or more acid accumulators. The low pressure relief gas is admitted to the top of the accumulator, where it is absorbed by a spray of cold acid from the acid storage tanks. The high pressure relief gas is admitted at the bottom of the accumulator and is absorbed as it bubbles up through the acid, provision being made for admitting part of the high pressure relief gas at the top of the accumulator when the pressure therein falls too low. The acid from the accumulator is either pumped or forced by steam pressure into the digesters. When two or more accumulators are used, they are provided with pressure or thermostatic controls, so that the relief gases from the digesters and liquor from the acid storage tanks are automatically changed from one accumulator to the other.—A. P.-C.

Regenerating Sulphite Cellulose Liquor. P. A. Barrou and R. Delvaille (trading as Société Barrou et Cie). Eng. pat. 269,909 (Apr. 21, 1926). The waste liquor is treated with an alkaline earth base such as lime or calcium carbonate to precipitate calcium sulphite. The liquid is treated with calcium bisulphite to precipitate an organic calcium compound, and is finally neutralized with sodium hydroxide to obtain a solution of sodium sulphite.—A. P.-C.

Drying Sulphite Waste Liquors to Obtain Dry Graular Solids. H. G. C. Fairweather, from Industrial Waste Products Corp. Eng. pat. 282,480 (Sept. 6, 1926). The heated or superheated liquor is sprayed into the hottest part of a current of heated gas and is carried only therewith through a drying chamber until desiccation is complete. The temperature of the drying gas may be up to 538 degrees C., at its hottest part, and should at all parts be above the boiling point of the liquor. The separated dry particles have a glazed surface and consequently show a reduced tendency to coalesce.—A. P.-C.

Fertilizers from Sulphite Waste Liquor. M. P. Nitsche. Can. pat. 271,893 (June 28, 1927). A fertilizer is produced from sulphite waste liquor by first liberating the sulphurous acid from the waste liquor by means of an acid sulphate, for instance, potassium bisulphate, and recovering the sulphurous acid for carrying on the process.—A. P.-C.

Method of Cooking Sulphite Pulp. G. H. Tomlinson. U. S. pat. 1,657,048 (Jan. 24, 1928). Wood chips are fed into the digester through the same opening and simultaneously with heated liquor which serves to soak the chips and wash them into position —A. P.-C.

Process for the Production of Cellulose by Decomposition of Vegetable Fibers. O. C. Strecker. U. S. pat. 1,658,213, (Feb. 7, 1928). Straw, wood, esparto or other vegetable fibers are treated with a decomposing solution containing a soluble oxy compound of the isocyclic series (such as potassium cresolate) in which one at least of the hydrogen atoms has been replaced by a metal. The solution may also contain castor oil soap or other auxiliary compounds.—A. P.-C.

Pulping Process. G. A. Richter assignor to Brown Co. Can. pat. 275,871 (Nov. 29, 1927). Raw cellulosic material is digested in a sulphurous acid solution of niter cake and sodium-sulphur compounds, which possess fiber-liberating action in sulphurous acid solution. The spent liquor is separated from the resultant pulp, and the sodium compounds are recovered from the liquor.—A. P.-C.

Pulping Process. G. A. Richter assignor to Brown Co. Can. pat. 275,872 (Nov. 29, 1927). A cooking liquor for the production of sulphite pulp contains calcium bisulphite and sodium bisulphite and has a combined sulphur dioxide content considerably in excess of the combined sulphur dioxide content of a saturated solution of calcium bisulphite.—A. P.-C.

Pulping Process. G. A. Richter assignor to Brown Co. Can. pat. 275,873 (Nov. 29, 1927). Wood chips are digested in an acid solution of sodium bisulphite, the sodium bisulphite content being in large excess of the acid content, at a temperature of 320 to 330 degrees F., under a pressure of 100 pounds per square inch, and for a period of 6 to 10 hours.—A. P.-C.

Wood Pulping Process. J. D. Rue, F. G. Rawling and S. D. Wells. Can. pat. 276,156 (Dec. 13, 1927). Wood is treated so as to dissolve the intercellular material without materially decomposing the lignocellulose content, by digestion with an aqueous solution containing sodium sulphite and an alkali capable of producing carbon dioxide during the period of digestion. The wood is boiled under pressure, carbon dioxide and steam being relieved during the boiling period.—A. P.-C.

Opening up of Materials Containing Cellulose. I. G. Farbenindustrie A.-G. Eng. pat. 279,036 (Aug. 26, 1927). The material, e.g., moist fir wood, is treated for one or more hours with a mixture of air and oxides of nitrogen at 40 to 50 degrees C., and is then exposed to the action of air alone for about 24 hours at the ordinary temperature, or at about 50 degrees C.—A. P.-C.

Process for Obtaining Cellulose Fibers from Vegetable Materials. W. I. Chidester. U. S. pat. 1,659,809 (Feb. 21, 1928). Material such as wood is cooked in a closed container and the contents of the latter are discharged into a body of liquid at lower temperature and pressure in such a manner as to produce a suction which disrupts the material and separates the fibers.—A. P.-C.

Process for the Recovery of Sodium Compounds from Sulphite Waste Liquors. C. H. Milligan. U. S. pat. 1,652,725 (Dec. 13, 1927). Sulphite waste liquor from cooking wood, or other aqueous solution containing sodium sulphide or other alkali metal sulphide, is treated with an organic acid such as abietic, oleic, stearic or palmitic acid capable of displacing hydrogen sulphide from its salts and which is replaceable by sulphur dioxide, and the reaction mixture is then treated with sulphur dioxide.—A. P.-C.

Road Binder. M. F. Coughlin. U. S. pat. 1,662,299 (March 13, 1928). A mixture is used comprising asphalt treated with 2.5 to 5 per cent of lime or other basic and bituminous substance, sulphite liquor and lactic acid (which reduces the viscosity).—A. P.-C.

Economics of Sulphite Pulping. Arno Frohberg. Papierfabr. 26, 17-22 (1928). Apparent economics may actually save less than the carrying charges on the plant required. A plea is made for study of the kinetics of the pulping reaction, especially the effect of hydrogen ion concentration. This should be measured under actual cooking conditions. Metals may catalyze the formation of sulphur trioxide, leading to a dark, weak pulp. Possible lines of study are indicated.—C. J. W.

Use of Heat in Pulp Cooking. Leo Friedländer. Papierfabr. 26, 26-29 (1928). A detailed analysis of heat requirements and losses in a 230 cubic meter sulphite digester, during a 13 hour Ritter-Kellner cook, is given. The waste liquor carries 45 per

cent of the heat input. At least 25 per cent is recoverable. Methods of recovery and possible economies are considered. Heating time should be shortened and cooking temperature and pressure increased.—C. J. W.

Typical Swedish Industry: Sora Kopparbergs Bergslag A. B. Anon. Mon. Papeterie Belge 8, 103-106 (Feb., 1928). An outline of the history of the mill.—A. P.-C.

All-Electric Paper Mill at Gatineau. J. N. Stephenson. Pulp Paper Mag. Can. 26, 597-618 (May 3, 1928). A detailed illustrated description of the groundwood, sulphite and news print mills of the Canadian International Paper Co., at Gatineau, P. Q. —A. P.-C.

Thunder Bay Groundwood Mill. E. C. Smith. Pulp Paper Mag. Can. 26, 517-519 (Apr. 19, 1928). A description and history of the mill.—A. P.-C.

Great Lakes Paper Mill. Anon. Pulp Paper Mag. Can. 26, 741 (May 31, 1928). A brief description of the new mill being erected by the Great Lakes Paper Company at Fort William, Ont.—A. P.-C.

Paper Research Literature. VII. C. J. West and B. W. Scribner. Paper Trade J. 86, No. 17, 51-52 (Apr. 26, 1928). A list of the contributions by members of the U. S. Bureau of Standards, Department of Commerce, in 1927, with brief abstracts.—A. P.-C.

An Outstanding Paper Research Laboratory. L. K. Arnold. Paper Ind. 10, 446d-446f (June, 1928). A description of the pulp and paper board research laboratory at the Iowa State College, Ames, Iowa.—A. P.-C.

Work of the Bureau of Standards. B. W. Scribner. Paper Trade J. 86, No. 15, 57-58 (Apr. 12, 1928). A brief outline of the nature of the work being carried out by the paper section of the U. S. Bureau of Standards.—A. P.-C.

Chemical Engineering in the Anglo-Canadian Mill. A. E. Buchanan. Chem. Met. Eng. 35, 205-209 (Apr., 1928); Paper Trade J. 86, No. 19, 59-65 (May 10, 1928). A description of the mill of the Anglo-Canadian Pulp & Paper Mills, Ltd., at Quebec City.—A. P.-C.

What Can We Do to Increase Net Profits? C. O. Wellington. Paper Ind. 10, 82-83 (Apr., 1928). An address discussing the importance of knowing costs and determining sales and manufacturing policies closely and carefully, particularly in a period of potential and actual over production such as the present one.—A. P.-C.

United States Patents on Paper Making. C. J. West. Paper Trade J. 86, No. 18, 68 (May 3, 1928). A list of patents issued during the first quarter of 1928.—A. P.-C.

Founder of the Paper Industry in America. Harrison Elliott. Pulp Paper Mag. 26, 823-824 (June 14, 1928). Historical notes on William Rittenhouse, founder of the paper industry in the United States at Germantown, Pa., in 1690.—A. P.-C.

Paper Industry in Southeastern France. Raoul Blanchard. Papier 29, 1301-1306 (Dec., 1926); 30, 73-87 (Jan.), 167-174 (Feb.), 291-298 (March), 397-404 (Apr.), 489-497 (May), 721-730 (July), 865-70 (Aug.), 945-953 (Sept.), 1055-1065 (Oct.), 1169-1175 (Nov.), 1275-1281 (Dec., 1927); 31, 51-57 (Jan.), 259-266 (March, 1928). A detailed discussion of its present status from the standpoint of manufacturing conditions, transportation and labor.—A. P.-C.

Cost and Technical Aids to Management. G. N. Collins. Paper Mill 51, No. 20, 20, 22 (May 19, 1928). A discussion of the functions of the cost and technical departments in paper mill organization.—A. P.-C.

Modern Machinery and its Relation to Quantity and Quality Production. George Rice. PAPER IND. 10, 64-66 (Apr.), 239-241 (May, 1928). A discussion of the importance and necessity of replacing old and antiquated by modern machinery, even though the former is still in running order.—A. P.-C.

Calculus in the Paper Industry. II D. S. Davis. Pulp Paper Mag. Can. 26, 383-384 (March 22, 1928). A mathematical discussion showing under what conditions a circular liquid-level chart may be planimetered to obtain the average head, and how to calculate the number of turns required to half open a gate valve, the number of turns required to open it full being known. —A. P.-C.

Mill Control. J. P. Kennedy. Paper Mill, No. 23, 9, 16 (June 9, 1928). An outline of proper raw materials, process and finished product control on a modern paper mill, being essentially a picture of such control as carried out in the mills of the American Writing Paper Co.—A. P.-C.

Applicaion of European Papermaking Mehods and Equipment to the manufacture of paper on the North American Continent. Anon. Paper Mill 51, No. 8, 166, 170, 172 (Feb. 25, 1928). A brief description of a number of Swedish apparatus, showing their merits in reducing costs.—A. P.-C.

Organized Scientific Research. E. R. Weidlein. Paper Trade J. 86, No. 11, 56-58 (March 15, 1928). An address dealing with the importance, scope, objects and advantages of organized scientific, and particularly chemical research.—A. P.-C.

Training for the Industry. Allen Abrams. Paper Trade J. 86, No. 12, 56-57 (March 22, 1928); Tech. Assoc. Papers XI (1928), 140. An outline of the plan proposed to effect closer coordination between the colleges and the pulp and paper industry and of the progress accomplished in carrying it out.—A. P.-C.

Bibliography of Paper Making for 1927. C. J. West and A. Papineau-Couture. Paper Trade J. 86, No. 8, 219-259 (Feb. 23, 1928); Tech. Assoc. Papers XI, 140-168 (June, 1928).—A. P.-C.

"Apso" Metal for Paper Mills. M. Chaudoye. Papeterie 49, 881 (Oct. 10, 1927). This is a stainless steel which is manufactured by the Aciéries de Pompey and the composition of which is not given. Its physical and chemical properties and applications are outlined.—A. P.-C.

Use of Corrosion Resisting Steels in the Paper Industry. J. A. Mathews. Paper Mill 51, No. 22, 24-28 (June 2, 1928); Paper Trade J. 86, No. 24, 60-62 (June 14, 1928). An address outlining recent progress in the production of corrosion resisting alloys suitable for paper mill use.—A. P.-C.

Analysis of Acid Resisting Bronze and Antimonial Lead. II. R. F. Smith. Pulp Paper Mag. Can. 26, 289-290 (March 22, 1928). A description of the methods used in the laboratory of the Hoyt Metal Company of Canada for the analysis of antimonial lead and of babbitt metal.—A. P.-C.

Use of Sodium Silicate in Paper Making. J. G. Vail. Paper Trade J. 86, No. 12, 58-59 (March 22, 1928); Pulp Paper Mag. Can. 26, 385-387 (March 22, 1928); Paper Mill 51, No. 12, 22-26 (March 24, 1928). A brief review of the numerous uses to which sodium silicate can be put with advantage in paper mills.—A. P.-C.

Hydrogen Ion Measurements in the Pulp and Paper Mill. W. F. Hoffman. Paper Trade J. 86, No. 8, 151-157 (Feb. 23, 1928); Paper Mill 151, No. 8, 70-78, 152 (Feb. 25, 1928). An explanation of the meaning and significance of active and total acidity, hydrogen and hydroxyl ion concentration, and the purpose of "buffers," with a brief description of the electrometric method for pH determination and an outline of the applications of pH determinations for controlling water supply, in sulphite, soda and sulphate mills, in bleaching and in paper manufacture.—A. P.-C.

Acidity and Alkalinity in Paper Making. J. R. Papeterie 49, 882, 885, 922-934 (Oct. 10, 25, 1927). A brief discussion of their importance with an explanation of their measurement by means of hydrogen-ion concentration determinations.—A. P.-C.

Technical Control in the Pulp and Paper Industry. Ernst Mahler, Paper Ind. 9, 2039-2043 (March, 1928); Paper Trade J. 86, No. 8, 117-119 (Feb. 23, 1928); Paper Mill 51, No. 8, 68j-68p (Feb. 25, 1928). An address discussing the functions of the technical man in the pulp and paper industry and where he can be fitted in as a useful member of the organization.—A. P.-C.

Paper Industry of Canada. Sigurd Stechmest. Papir-

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Journalen No. 18, 225 (1927). A review of the development of the news print industry in Canada, with tables showing costs of manufacture, wages, and cost of staple foods.—C. E. P.

Causes of Dirt Spots in Paper. Ivar Lundbeck. Paper Mill 51, No. 9, 6, 8 (March 3, 1928). A discussion of the various sources of dirt in paper and of the means to be taken to prevent them.—A. P.-C.

Separating Paper Pulp. C. R. Robinson assignor to Robinson Fibre Corp. U. S. pat. 1,644,447 (Oct. 4, 1927). In order to separate the fibers of paper pulp, a solution of sodium peroxide is added to the pulp to render it alkaline to litmus, and the mixture is heated somewhat above atmospheric temperature.—A. P.-C.

Chemical Pulps for Paper Making and for the Manufacture of Rayon. M. Brot. Papier 31, 291-301 (March 1928). An address briefly outlining the several pulping processes and discussing the properties of the products obtained from the standpoint of their transformation into various grades of paper or into rayon. —A. P.-C.

Paper terms. Anon. Papeterie 49, 646-650, 763-794, 838-842, 890-894 (July 25, Sept. 10-Oct. 10, 1927). German, English, French and Italian equivalents are given for the various kinds and grades of papers and boards.—A. P.-C.

Technical Problems in Waste Utilization and Stream Improvement. C. M. Baker. Paper Trade J. 86, No. 8, 159-171 (Feb. 23, 1928); Paper Mill 51, No. 8, 138-148, 152 (Feb. 25, 1928). A theoretical discussion of the technical problems involved in the effect of wastes upon streams, with a description of sanitary analyses of the wastes and water of the stream. Application of the theoretical discussion of the effect of pollution on streams is illustrated by surveys of the lower Fox and Wisconsin rivers, in Wisconsin, made by the Bureau of Sanitary Engineering of the Wisconsin State Board of Health and by the pulp and paper industry of that state, chemists of fourteen pulp and paper mill laboratories cooperating in the work.—A. P.-C.

Chemistry of Lignin. Georges Dupont. Pulp Paper Mag. Can. 26, 1183-1188, 1235-1237, 1254-1258, 1267-1268, 1297-1300, 1326 (Aug. 30-Sept. 20, 1928). A review of the chemistry and technology of lignin, with bibliography of 104 references.—A. P.-C.

X-Ray Investigations on Cellulose and Its Derivatives. J. J. Trillat. Rev. Gen. Colloides 6, 57-68, 89-95 (March, April, 1928). A review. The principal results obtained to date may be summarized as follows: (1) Natural cellulose (cotton, flax, ramie, straw, etc.) seems in all cases to have a crystalline structure; moreover, the microcrystals can exhibit a general orientation in the direction of the fiber, which is revealed by a characteristic appearance of the diagrams. (2) By making certain hypotheses, it is possible to determine the crystalline network of cellulose, which seems to be rhombic with an elementary unit containing 4 to 6 hexose groups. (3) The transformation of cellulose under the influence of various reagents (acids, alkalies) can easily be followed by means of x-ray diagrams; in this way the combination of alkalies with cellulose (formation of alkali-cellulose), the phenomena of swelling, and hydra-, hydro- and oxycellulose can exist in two forms, (a) native cellulose, and (b) mechanically deformed cellulose (hydracellulose), which is the form under which it is generally found after being subjected to treatments causing swelling. (4) Cellulose acetates and nitrates are amorphous, but in certain particular instances they may present a crystalline character. (5) The dimensions of the cellulose crystallites have been determined and found to correspond practically to the average dimensions of colloidal micellas.—A. P.-C.

Does the Theory of Micellar Complexity Apply in the Study of Cellulose? M. Catoire. Bull. Soc. Chim. Biol. 10, 714-735 (1928). The details of swelling and of deflocculation of the cotton fiber denote a complex structure which is degraded by stages acting as voluminous polymers which do not decompose by the immediate liberation of the molecules of their constituents, but by the formation of other polymers and those in turn still others, before the final monoses are reached. The demineralization of cellulose effected on the acetyl derivative in clear acetic solution by repeated precipitation is never complete. There remains after the last operation a molecule of silica for 1,000 molecules of $C_6H_{10}O_5$. This demineralization occurs by the division between certain micellas, the more voluminous containing silica as a constituent and not as an impurity, and the less voluminous which perhaps contain a biological complex of polymers of $C_6H_{10}O_5$ and (SiO_4). Swelling, deflocculation and depolymerization of cellulose are influenced by the presence of minerals, especially by the alkaline earth bases, which cellulose contains in the natural state, and to a less extent by mineral elements artificially incorporated. The desiccation of nitrocellulose, especially when it is low in alkaline earth sales, has a depolymerizing action, since it becomes more soluble in acetone or alcohol-ether as the desiccation is prolonged. Acetycellulose having stood in decinormal alkali and then dried loses its property of swelling and it dissolves in ordinary solvents.—A. P.-C.

Action of Alkalies on Cellulose. G. W. Blanco. Ind. Eng. Chem. 20, 926-930 (Sept., 1928). This article summarizes a portion of the work performed during the last 80 years on the action of alkalies on cellulose. The review is limited chiefly to the mercerizing effects of caustic soda solutions on cotton cellulose. Reference is also made to the more recent investigations using other alkalies and cellulose materials. The published data have aimed to show that cellulose and caustic soda react to form a chemical compound or that the combination of the two is merely a physical one. A bibliography of 60 references is given.—A. P.-C.

Structure of Mercerized Cellulose. I. The Space Lattice of Mercerized Ramie Cellulose as Developed From X-Ray Data. O. L. Sponsler and W. H. Dore. J. Am. Chem. Soc. 50, 1940-1950 (July, 1928). X-ray diffraction data are given for ramie cellulose which has been subjected to mercerization processes with various strengths of sodium hydroxide solutions. The evidence shows that there is a critical concentration of the alkali, at about 13 per cent, above which the fibers are mercerized but below which they remain unmercerized. From the diffraction patterns of mercerized ramie cellulose a space lattice has been developed. When compared with the unmercerized lattice the c axis is seen to be unchanged while the a and b axes have been changed from $a = 5.40$ Angstrom units in the unmercerized to $a = 4.53$ in the mercerized, and from $b = 6.10$ to $b = 7.61$. The angle between axes a and b is changed from 90 to 83 degrees. As a result of mercerization the chains of glucose units are shifted laterally in the wall of the fiber and remain unbroken. Within the chain the original glucose unit remained unchanged except for a shift of the hydroxyl of the sixth carbon atom. The X-ray diffraction patterns indicate that there is a partial rotation of some of the glucose units about the long axis of the chain. A comparative study of the structures of mercerized and unmercerized cellulose produces additional support to the view that the constituent units of cellulose are united in chains by primary valence linkages.—A. P.-C.

Colloidal Properties of "Pure" Cellulose. P. P. Von Veimarn. Kolloid-Z. 44, 212-218 (1928). The resistance of many types of cellulose fibers to the dispersing action of hot salt solutions is not a characteristic property of the cellulose itself, but must be referred to the effect of the surface coating of the fibers. Thus, cotton is but slowly dispersed in a sodium thiocyanate solution boiling between 142 and 150 degrees and the gel formed on cooling the sol contains fibers. Extraction with petroleum ether increases the ease of dispersion. Exhaustive extraction with petroleum ether and xylene renders the material as readily dispersible as pure filter paper and gives a clear gel. A cellulose cannot be considered as actually "pure" until this resistant surface coating is entirely removed; to do this the fibrous structure must be completely destroyed. The procedure necessary to purify a fibrous barium sulphate precipitate is cited. There should be but one "pure" cellulose and this should in theory be obtainable in macro-crystalline form. Guignet cellulose approaches such a "pure" cellulose in its properties.—C. J. W.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Capacity and Costs*

By Thomas J. Burke, C. A.[1]

It always gives me pleasure to visit Springfield and Holyoke, because I have been helped on many occasions by friends in this district. On behalf of the Association I, first of all, want to thank the members of your Committee for the effective and unselfish service they have given to their industry, by arranging the Monthly Meetings that have been held during the past season. They are evidently believers in Theodore Roosevelt's saying, that "every man owes something to the up-building of his business or profession", and I hope that the work they have done and the support they have received from those who have attended the meetings regularly, will bear fruit in the future for them personally, and that they will receive the reward of their increased usefulness in the shape of higher salaries and better positions. I say increased usefullness because no one can attend meetings of this kind without picking up at least one constructive thought or idea, which translated into action, will prove beneficial to the man and the mill.

Now I want to start off tonight by saying a few words on the matter of policies, and when I say policies, I mean those policies which should be used in running a business. Every business is founded as a rule on some specific idea in the mind of one man, and accordingly as he elaborates on and works out his thought or idea, so the business is a success or a failure. Outside conditions naturally have a bearing on the subject, but we can dismiss those from our consideration tonight, because outside conditions today are such, that success can only come to those who are fully prepared for all eventualities.

Policies Divided Into Three Groups

Now policies may be divided into three groups; general, major and departmental. The general policy covers products, markets, class of customers and general conduct of business, whether it shall be run on a conservative or speculative basis. It would seem as if in the paper industry, in many cases, mills operate without setting up such policies and work rather on an opportunistic principle; perhaps because they feel that conditions are such, that they must take advantage of every opportunity offered to keep their machines running to stay in business, and this being the case, that it is not much use for them to attempt to outline very definite policies, since they may have to throw them overboard in the very near future. I want to state however, that there is another aspect to this problem, namely, that if the facts to be faced are serious—(and they are), there is all the greater need for us to face them with well-planned campaigns. We must get at the facts of the situation, digest them and guide ourselves accordingly, and I know of no better way for setting up sign posts along the path to prosperity, than by drawing up a written statement of the general policies to be pursued in the conduct of the business. Having done this, our next consideration must be the major policies, which are naturally based on the general policies decided on by the directors. They concern the methods to be used in operating the business, and will probably be the work of the chief active executive. When drawn up, they might profitably be endorsed by the Board as being in line with their "general policy" plan. These major policies may be divided into those relating to the actual production of the paper, such as financing, expansion, organization, manufacturing, purchasing, personnel, etc., called "internal major" policies, and second, those relating to the disposal and distribution of the paper, such as sales, prices, freight rates, advertising, credits and collections, which may be termed "external major" policies.

Investment in Fixed Assets

Of the "internal major" policies perhaps the most important in our industry, on account of our large proportionate investment in fixed assets, and our low capital turnover per annum, is the one to be adopted in connection with the financing of the business. On what basis shall permanent capital be raised? How much temporary accommodation are we likely to require, and why, and where can we get it when we want it? What ratio should be maintained between fixed and working capital? What shall be our credit policy? These are all important points requiring careful consideration by the chief executive of every paper mill, and our policies regarding them should be definitely outlined and followed. The working organization through which the executive will carry out his plan, requires that the men chosen to head the different departments shall have clearly outlined for them their responsibility and authority. Whether paper-making is an art or a science, it requires skill of the highest order if paper is produced today at a cost permitting a reasonable profit, so that the Superintendent as we call him, rather than the Production Manager, requires all the assistance he can obtain, and a definitely outlined policy will undoubtedly assist him materially in carrying out his difficult job. Since the making of good paper depends among other things on the use of the right kind of pulp, rags, and other raw materials, it is essential that the purchasing department shall also work on a definite policy—But so much for the "Internal Major" policies, although I have not touched on one of the most important, namely, the policy to be used in dealing with the "personnel", which is a subject by itself.

What Is Your Sales Policy?

The "external major" policies named above are equally im-

* Presented at the meeting of the Connecticut Valley Division of the Cost Association of the Paper Industry, Hotel Kimball, Springfield, Mass., April 23, 1929.

[1] Sec.-Treas. of the Cost Association of the Paper Industry.

portant. What is your sales policy? In what markets do you desire to sell your paper? Through whom do you want to sell it and at what price? Such questions are best answered by those executives who are working on a sound policy basis, and they should receive all the help possible, by knowing just where they stand in relation to the general policy on which the business is being conducted. Now just a word about prices. On what basis is the markup to be figured, or isn't there any markup to be figured? I ask the question frankly of some executives, for I know some of the prices prevailing today cannot include a profit. Presuming there are to be markups representing profit, are there to be variations as between different classes of customers? The recent so-called American Can case decision opens up a wide field of conjecture in this connection, but I haven't time to refer to it more fully now. What about discounts, rebates, and our old friend "job lots?" We must have very definite policies about all these things and not permit our distributing friends to man-handle us to the extent, where we absolutely "sell our souls for a mess of pottage." It is true that "opportunity makes the thief", and it is also true that an offer of a profitless order or even one at a loss will more often be accepted by a mill that has no very definite policies concerning the prices at which it will sell its products, than one which stands firm on a rock-bottom price—which includes a profit, or at least leaves it better off than if it had not taken the order, by which I mean, that sometimes by taking an order a little below cost you lose less, than you would by shutting down part of the mill.

A Point on Capacity

Now here's one point on capacity at last. No matter how much our surplus productive capacity is, in any grade at all, we may as well get it into our heads now as later, and save some grief and money, that we can never gain anything, anyhow, anywhere, by selling paper at a loss, and right now I make my best bow to Mr. S. L. Willson of the American Writing Paper Company, Inc., (who made 80 per cent more profit last year on 8 per cent less sales). Certainly the profit was small on the investment, but give him time and just note the fact, that every one per cent he takes off his sales he makes 10 per cent more profit. It certainly will be interesting to see how far that can be carried. That's just the kind of a definite policy we want to establish in this industry—"Profits or perish"—"A profit a day keeps the sheriff away."

Use standard costs and figure your profits daily, and try to make them equal the amount to earn 15 per cent on the capital *employed,* not invested, but "employed". That includes long term loans as well as capital invested and accumulated profits, all of which represent money used in the business and on all of which a reasonable profit ought to be made.

Anyone who accepts an order at a loss hasn't any policy, in my humble opinion; in fact, the only justification I have ever heard put forward for this practice, is that in order to keep the customer's goodwill, or to fill his car we must fill his whole order, and that means taking part of it at a loss. I put it to you, that that's a poor policy, if it's a policy at all. The word "policy" is also used in connection with insurance; well that doesn't insure anything that I can see, except trouble. Why should not that customer next time ask you to supply another part of the order at a loss, and so on until you're not making a "black" cent but a few "red" ones instead?

Another Point

Another point is, that the paper you include at a loss may be the principal product of some other mills—they hear about it—the buyers see to that, and then these mills retaliate by selling your profitable line at a loss, just as you sold their profitable line at a loss. It's a time for constructive policies rather than destructive policies. We have not got to fight to an inglorious finish to obey the Sherman and related acts; we have got to compete on a fair basis that's all, and selling below cost is just as much unfair competition as agreeing to raise prices.

COST SECTION

The Third Type of Policies

In my exuberance about prices I had almost forgotten the third types of policies, which are merely those drawn up for the departmental executives, which go into more detail regarding the management of the departments, in accordance with the major and general policies. To conclude about policies, they should be specific in outlining the boundaries beyond which no one shall go, and at the same time should definitely point the way to progress.

I have somewhat stressed the necessity for setting up sound policies, both general and major, (external and internal), also departmental, because this subject of "capacity and costs" is one regarding which it is essential that a definite policy shall be established, first, regarding the estimated production that can profitably be sold during a period (you will note I say profitably), and second, presuming this estimate is below the normal productive capacity regarding the most efficient way of meeting the sales requirements. Here's my thought on the subject. Can we agree on what is the normal running time of a paper machine for a year? I have heard estimates all the way from 6000 to 7440 hours a year, an increase in the latter case you will note of 24 per cent above the lower estimate, and that is a difference that can easily change "black" into "red", because what we are selling really, is the running time of our paper machines. A difference of 24 per cent in the estimate of what we are really selling is very significant when you consider we are distributing a large fixed cost on these estimates. Our fixed costs are particularly heavy because of our large investment in fixed assets. Now there are 365 days in the year (omitting leap year which we will leave to the ladies to argue about), 52 Sundays and 3 legal holidays, and that leaves 310 working days of 24 hours, or 7440 hours, which I would say was 100 per cent operation. Now apparently it is legal to agree on a 5 day week, judging from what Secretary Davis said on Feburary 5 last at a conference of the boxboard manufacturers. He said in part:

Remarks by Sec. Davis

"Here in this country of ours, we are enjoying for the most part the greatest prosperity any people have ever had. That prosperity has come as the result of efficient management, business sense and fair play. The industries that are *not* enjoying this prosperity begin to stick out like sore thumbs. It is so unusual and so unnecessary for American industry not to be prosperous, that any industry found not to be so, becomes a subject of public suspicion and people demand to know what is the matter with it and who is responsible."

Mr. Davis then went on to describe the action taken at two previous conferences of the Boxboard Manufacturers and their failure to get 100 per cent co-operation, also, that their idle capacity exceeded 25 per cent. He admitted it was impossible for the Department of Labor's Committee to police the industry but said, that the Federal Trade Commission would be asked to investigate the industry if they persisted in running by "the rule of the jungle".

That is a very definite call to action by a responsible government official and while it was addressed only to the Boxboard Manufacturers, it might equally as well have been directed to the whole paper industry.

Idle Capacity Figures

In this connection note the figures compiled by the Writing Paper Manufacturers Association on estimates of capacity and production by grades for 1928. The "idle capacity" figures read:

News print	18 per cent
Book	22 per cent
Board	22 per cent
Wrapping	25 per cent
Writing & Cover	21 per cent
Tissue	23 per cent
Felts & Building	37 per cent
All other	19 per cent

You will see we are all more or less in the same boat, and the question is, are we going to sink the boat or keep it travelling on an even keel toward Prosperity.

If we *can* agree as to the number of hours we can normally expect to run our machines during a year, we shall at least have accomplished something to prevent the boat "rocking" so badly. I suggest, we adopt "No Sunday work" as a general policy for the industry. We will allow 2 tours (16 hours) each Saturday for necessary repair work, etc., to be done on machines that would otherwise be done on Sundays. Our normal running time then would be—

365 days less 52 Sundays & 3 Legal Holidays = 310 days or	7440 Hrs.
Deduct (52 × 16) = 832 say 840 hrs. for Repairs (Saturday)	840
	6600 Hrs

6600 hours running time per annum then would represent the normal operating capacity of our machines. You will note "down" time for wash-ups, sudden breakdowns, etc., has not been considered. Nor has lost time due to lack of orders.

So Called Normal Capacity

If we accept this estimate of 6600 running hours per annum, that will represent our so-called normal capacity, namely, what our machines can make in that time. Now the only costs affected are of course, as I mentioned before, the so-called fixed costs, namely, those that are calculated on a time basis instead of a use factor, one of which strangely enough is depreciation. I say strangely enough, because while we are improving our machines right along, speeding them up in many ways, we have not and probably will not change the basic method of producing paper. The machines are largely of the same type; they have been used for these many years, so it would seem as if a better way of figuring depreciation would be on the basis of the tonnage produced; however, this will require that everything else should be in line, namely, that the mill should be working on a full standardized system throughout, so I won't say any more about it at present.

Other Fixed Assets

Other fixed costs are of course insurance and taxes (excluding income), and mill burden including items, which for some reason or other cannot be directly allocated on the basis of services rendered. However, all these items run into money. Let us assume in some mill they amount to $900,000 a year, and that this mill figures that it can run 7440 hours a year; the fixed overhead cost per hour running time is approximately $121.00 per hour. Now there are two other mills whose fixed costs also total $900,000 per annum; one of these figures on the above named basis that 6600 hours running time per annum represents its normal and that it will distribute its overhead accordingly. Thus its fixed overhead cost is $136.36 per hour, an increase of $15.36 per hour over the first mill.

Not So Optimistic

Now the third mill is not so optimistic as the others. It has made a thorough canvas of the sales situation and has decided that in view of competitive conditions, and having studied the statistics available regarding the percentage of capacity at which its competitors are running and have been running for sometime past, that some allowance should be made for the factor of poor or medium demand. It also takes into consideration the fact, that no industry can expect to run at full blast indefinitely; that no progressive industry curtails its productive capacity to the point where this only just exceeds the current demand, but by providing capacity at least 10 per cent in excess of this demand, ensures the continuance of business on a sound competitive basis and prevents loss to its customers through sudden price increases caused by sudden increases in demand, above the productive capacity of the industry. This is in the public interest and this mill bearing all these factors in mind, estimates that it will only be able to run at 80 per cent of its 100 per cent capacity, of 7440 hours, 80 per cent of 7440 is 5952, so it figures on a normal running time of 6,000 hours. Now taking this mill's overhead cost at $900,000, I get a figure of $150.00 per hour, an increase of $29.00 per hour over the first mill and $13.64 over the second. Now, if everyone gets a fair share of the business, that mill's figure really represents the true situation in all grades in our industry today. Instead of throwing a large amount into their unabsorbed burden account and deducting it in a lump sum from profit and loss account, at the end of their fiscal period, they absorb this expense as it occurs.

An Appreciable Difference

Suppose each of these mills has four machines, the fixed overhead cost per hour per machine would then amount to $30.25, $34.09 and $37.50 respectively. That's an appreciable difference caused simply by a decision on policy. It is not a cost accounting decision, it's an executive decision. We are faced with a problem of a large surplus productive capacity and we cannot solve it by putting these unabsorbed items into an account to be later deducted from our profits. And why should we do this, when we know beforehand just what the facts are? Cannot we agree at least on 6600 hours production per annum as representing our normal productive capacity, and distribute our fixed overhead on this basis?

Now my time is drawing to a close, and since Mr. Alden is here at my suggestion, I certainly do not want to take more than my share of the time, as I am anticipating a very interesting talk from him. I trust however, that before we leave tonight, I am going to get some helpful suggestions from you on some of the points I have raised here.

Should Study Business Conditions

We accountants should give more time to a study of the general business conditions in the industry, as shown by the statistics published by the Writing and other Associations affiliated with the A. P. & P. A. We must use more care in compiling the data which makes these statistics possible. I hope that as a result of closer co-operation between us and the statisticians, the statistics may be made more reliable. This co-operation is necessary partly because of the different bases on which capacity is now being figured. Here again, the question of policy is involved. It should be settled by the executives and a general policy set up for the guidance of the statisticians. The statisticians should then set up major policies, internal, regarding carrying on the work in their own bailiwicks, and "external" in connection with the methods to be adopted and forms to be used in collecting the data. These major internal and external policies might well be drawn up after a consultation with a representative Committee, (which has already met but does not meet often enough), in my opinion.

Correct Statistics Important

The executives are vitally concerned in getting correct statistics today, and the accountants are vitally concerned in compiling them, and that's why starting at the top, we should draw up a set of policies to be used so that boundaries may be clearly defined, and the work proceed on a satisfactory basis.

In conclusion I want to say, that while I am only asking for an agreement on 6600 hours, I feel that since it is in the public interest to have a productive capacity of at least 10 per cent in excess of the current demand, it surely would be reasonable to agree that the third mill's figure of 6,000 hours would represent a fair figure. However, if we can agree on 6600 hours, we shall make a move in the right direction.

Swedish News Print Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 1, 1929.—Production of newsprint paper by the Swedish mills during the month of February totaled 19,595 metric tons while export shipments totaled 13,693 tons. Nearly one-third went to the United States, France with 2,222 tons ranking second, and the United Kingdom with 1,227 tons fourth.

COST SECTION

To Investigate Newspaper Stock Purchases

WASHINGTON, D. C., May 8, 1929.—Senator Walsh of Montana, has introduced a resolution in the Senate which was passed asking the Post Office Department to furnish certain information in connection with the purchase of stock in newspapers by the International Paper and Power Company. The resolution follows:

WHEREAS it appears from testimony taken by the Federal Trade Commission under and by virtue of Senate Resolution 83, Seventieth Congress, first session, that the International Paper and Power Co. and its affiliated concerns is the owner of stock in the *Boston Herald* and *Traveler*, published at Boston, Mass.; the *Chicago Daily News*, published at Chicago, Ill.; the *Chicago Journal*, published at Chicago, Ill.; the *Tampa Tribune*, published at Tampa, Fla.; the *Greensboro Record*, published at Greensboro, N. C.; the *Knickerbocker Press*, published at Albany, N. Y.; the *Albany Evening News*, published at Albany, N. Y.; the *Brooklyn Eagle*, published at Brooklyn, N. Y.; the *Augusta Chronicle*, published at Augusta, Ga.; the *Columbia Record*, published at Columbia, S. C.; the *Spartanburg Herald Journal*, published at Spartanburg, S. C. and possibly other interests in other journals: Therefore be it

RESOLVED, That the Postmaster General is hereby directed to transmit to the Senate for its information a copy of the statement filed by the editor, publisher, business manager, or owner of each of the newspapers above enumerated, setting forth the names and post-office addresses of the editor and managing editor, publisher, business manager, and owners and the stockholders if the publication be owned by a corporation, and also the names of the known bondholders, mortgagees, or other security holders, as required by the act of Congress approved August 24, 1912.

CHEMICAL SHOW IS A SUCCESS

(*Continued from page 29*)

Lockwood Trade Journal Co.

At the booth of the Lockwood Trade Journal Company, of 10 East 39th street, New York, is displayed the many publications of that organization, including the PAPER TRADE JOURNAL, Lockwood's Directory of the Paper and Allied Trades, and numerous technical books for the pulp and paper industries.

Oliver United Filters, Inc.

One of the most interesting features of the exposition is the demonstration of an Oliver Continuous Filter operating in conjunction with a Proctor and Schwartz Continuous Dryer. Oliver United Filters, Inc., are also displaying several of their eight basic types of filters, together with some of their modifications, and representatives of the organization are on hand to demonstrate their application in relation to filtering problems.

Philadelphia Quartz Co.

The Philadelphia Quartz Company in its attractive booth on the mezzanine floor, exhibits its different grades of silicate of soda, which include liquid, powdered and solid silicates. One attraction consists of a poster, "The Silicate of Soda Tree" which charts the various uses of silicates. Doucil, the water softening material, is also on display.

Roessler & Hasslacher Chemical Co.

Paper making chemicals are demonstrated at the artistic booth of the Roessler and Hasslacher Chemical Company, New York. R. & H. chemicals and service is a lever which responds quickly and intelligently to the needs of the chemical consuming industries. R. and H. co-operates through its laboratories with the paper, textile, rubber, ceremic, and other industries.

Republic Flow Meters Co.

An important and instructive exhibit is provided by the Republic Flow Meters Company, of Chicago, Ill. The efficiency of Republic Flow Meters is acknowledged in the paper industry where they have gained an enviable reputation. Flow meters provide a complete check on the operation of each department. They provide a complete and accurate record of the generation, distribution and utilization of power in the plant.

A. O. Smith Corporation

The A. O. Smith Corporation, of Milwaukee, Wis., is showing a section from a commercial-sized pressure vessel of Smithweld construction, also a collection of samples and specimens demonstrating the qualities of the Smithweld. Besides some other interesting objects of Smith manufacture, there is a representative collection of photographs illustrating a variety of products built by this company. Bulletins especially prepared for the occasion are available for distribution.

The W. S. Tyler Co.

A very large space in the Exposition is occupied by the W. S. Tyler Company, of Cleveland, Ohio. Hummer Electric Screens and Hummer Vibrators are specially featured. The W. S. Tyler Company manufactures Fourdrinier Wires in brass, bronze and phosphur bronze, widths up to and including 250 inches, also cylinder faces, washer wires and corduroy cloth. Delays of production in hundreds of plants have been saved by first aid shipments of woven wire screen from the Tyler organization.

U. S. Testing Co., Inc.

The United States Testing Co., Inc., New York, are maintaining a booth at the Chemical Show to demonstrate the facilities of the organization for making tests, analyses and sampling. For the paper and pulp industry, the laboratories of the U. S. Testing Company provide microscopical examination, chemical analyses, and physical tests of paper under standard conditions of humidity and temperature by official standard methods of the Technical Association of the Pulp and Paper Industry, also sampling and moisture determination in woodpulp.

Michigan Paper Co. Running Full

KALAMAZOO, Mich., May 6, 1929.—The Michigan Paper Company is running about at capacity in both its main plant at Plainwell and the coating division in Kalamazoo, according to George W. Gilkey, general manager of the company. He admits that conditions are not altogether satisfactory and business is not quite as good as a year ago.

"New equipment installed during the past twelve to eighteen months have greatly increased our capacity, said Mr. Gilkey. "That, together with the fact that it has been a rather poor year for all book mills, adds to our operating problems. We aim to run as much on full time as much as possible."

It will be recalled the Michigan Paper Company took over the plant of the defunct Bradford Company and paid all the outstanding obligations, though Bradford stockholders lost a major portion of their investment.

Acquires Control of Chicago Mills

Control of the Middle States Paper Mills, Inc., Chicago, Ill., has been acquired by the Pacific Northwest Paper Mill, Inc., Portland, Ore., according to D. D. Madden, president of the company.

The new mill will be devoted to the manufacture of "Adwrap" serving customers in the Middle West. It will be under the direction of Coler Campbell, vice-president of the Pacific Northwest Paper Mills, Inc.

In "Adwrap", the merchant can have his store name or advertisement built right into his wrapping paper by means of a special, patented process. Other features are the artistic background designs and colors which may be secured in "Adwrap," the wrapping paper that advertises."

"Adwrap" has enjoyed a healthy growth in sales since its introduction three years ago and now is used by the majority of better stores throughout the United States and Canada.

Mohican Pulp & Paper Co. Dissolves

PORT EDWARD, N. Y., May 4, 1929.—A certificate of voluntary dissolution was filed with the Secretary of State this week for the Mohican Pulp and Paper Company of Middle Falls by the New York Power and Light Corporation, owners of the capital stock.

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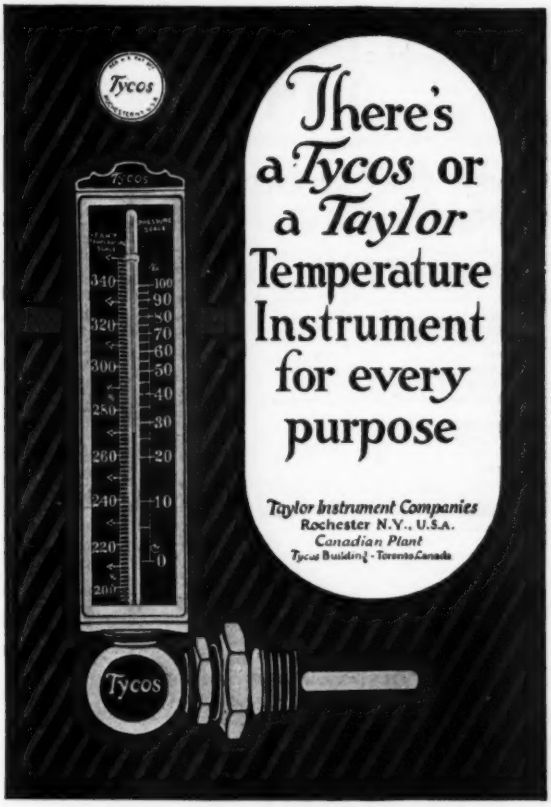

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For 83 Years Makers of Fine Faced Felts For Papermakers

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 4, 1929

SUMMARY

Cigarette paper	1,452 cs.
Wall paper	24 bls., 30 cs.
Paper hangings	32 bls., 14 cs.
Hanging paper	1 cs.
News print	643 rolls
Printing paper	154 cs.
Packing paper	68 cs.
Fancy paper	3 cs.
Envelopes	24 cs.
Colored paper	52 cs.
Writing paper	41 cs.
Drawing paper	5 cs.
Filter paper	168 bls.
Decalcomania paper	37 cs.
Transfer paper	23 cs.
Surface coated paper	228 cs.
Baryta coated paper	23 cs.
Photo paper	3 cs.
Tissue paper	65 cs.
Stencil paper and ink	109 cs.
Parchment paper	18 bls.
Carbon paper	395 cs.
Silk paper	1 cs.
Straw board	427 rolls
Miscellaneous paper	357 cs.

CIGARETTE PAPER

P. J. Schweitzer, Pres. Garfield, Marseilles, 65 cs.

M. Spiegel & Son, Pres. Garfield, Genoa, 11 cs.

British American Tobacco Co., Homeric, Southampton, 50 cs.

American Tobacco Co., Roussillon, Bordeaux, 200 cs.

American Tobacco Co., Schodack, Bordeaux, 400 cs.

De Manduit Paper Corp., Schodack, St. Nazaire, 726 cs.

WALL PAPER

Schmidt & Pritchard, Hamburg, Hamburg, 1 bls.

F. J. Emmerich, Hamburg, Hamburg, 8 bls.

Globe Shipping Co., Hamburg, Hamburg, 3 bls.

Guaranty Trust Co., Hamburg, Hamburg, 9 cs.

F. J. Emmerich, Baltic, Liverpool, 4 bls.

Universal Car Loading Co., Dresden, Bremen, 2 cs.

W. H. S. Lloyd & Co., Minnekahda, London, 2 bls.

R. F. Downing & Co., Homeric, Southampton, 10 cs.

J. E. Bernard & Co., Homeric, Southampton, 8 cs.

A. C. Dodman, Jr., Inc., Homeric, Southampton, 6 bls., 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnekahda, London, 17 bls., 3 cs.

W. H. S. Lloyd & Co., Lancastria, Liverpool, 4 bls.

A. C. Dodman, Jr., Inc., Lancastria, Liverpool, 11 bls., 11 cs.

HANGING PAPER

C. Grimmer & Son, Roussillon, Havre, 1 cs.

NEWS PRINT

Perkins Goodwin & Co., Hamburg, Hamburg, 445 rolls.

Parsons & Whittemore, Inc., Hamburg, Hamburg, 198 rolls.

PRINTING PAPER

E. Dietzgen & Co., Hamburg, Hamburg, 16 cs.

E. Dietzgen & Co., Ryndam, Rotterdam, 42 cs.

Dinglestedt & Co., Dresden, Bremen, 1 cs.

Karl Pauli Corp., Dresden, Bremen, 10 cs.

P. C. Zuhlke, Dresden, Bremen, 59 cs.

Keller Dorian Paper Co., Roussillon, Havre, 26 cs.

PACKING PAPER

M. Harrison Co., Hamburg, Hamburg, 68 cs.

FANCY PAPER

Hensel, Bruckman & Lorbacher, Roussillon, Havre, 3 cs.

ENVELOPES

J. Beckhard & Co., Dresden, Bremen, 24 cs.

COLORED PAPER

Tamm & Co., America, Bremen, 7 cs.

S. Gilbert, Dresden, Bremen, 45 cs.

WRITING PAPER

W. J. Byrnes, France, Havre, 1 cs.

Globe Shipping Co., France, Havre, 3 cs.

Japan Paper Co., France, Havre, 7 cs.

L. Bamberger & Co., Sarcoxie, Havre, 3 cs.

G. W. Sheldon & Co., Homeric, Southampton, 4 cs.

Heemsoth, Basse & Co., Homeric, Southampton, 2 cs.

Guibout Freres, Homeric, Southampton, 12 cs.

F. B. Vandegrift & Co., Roussillon, Havre, 2 cs.

Globe Shipping Co., Roussillon, Havre, 2 cs.

Japan Paper Co., Roussillon, Havre, 2 cs.

Guibout Freres, Roussillon, Havre, 3 cs.

DRAWING PAPER

Kolesch Co., American Banker, London, 1 cs.

J. Henschel Co., Hamburg, Hamburg, 4 cs.

FILTER PAPER

American Express Co., Pres. Garfield, Marseilles, 2 bls.

J. Manheimer, Homeric, Southampton, 158 bls.

DECALCOMANIA PAPER

C. W. Sellers, Hamburg, Hamburg, 6 cs.

C. W. Sellers, America, Bremen, 4 cs.

B. F. Drakenfeld & Co., Lancastria, Liverpool, 16 cs. (duplex).

B. F. Drakenfeld & Co., Lancastria, Liverpool, 11 cs. (simplex).

TRANSFER PAPER

——, America, Bremen, 23 cs.

SURFACE COATED PAPER

Universal Car Loading Co., Hamburg, Hamburg, 5 cs.

Quality Art Novelty Co., Hamburg, Hamburg, 29 cs.

Phoenix Shipping Co., Hamburg, Hamburg, 2 cs.

P. C. Zuhlke, Dresden, Bremen, 192 cs.

BARYTA COATED PAPER

Globe Shipping Co., America, Bremen, 23 cs.

PHOTO PAPER

J. J. Gavin, Lancastria, Liverpool, 3 cs.

TISSUE PAPER

G. W. Sheldon & Co., American Banker, London, 3 cs.

Old Master Paper & Pulp Corp., Hamburg, Hamburg, 29 cs.

M. Snedeker Corp., Chile Maru, Hamburg, 6 cs.

P. J. Schweitzer, Pres. Garfield, Marseilles, 27 cs.

STENCIL PAPER AND INK

Arlac Dry Stencil Co., Hamburg, Hamburg, 109 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Hamburg, Hamburg, 18 bls.

CARBON PAPER

P. H. Petry & Co., Hamburg, Hamburg, 395 cs.

SILK PAPER

H. D. Catty Co., Ryndam, Rotterdam, 1 cs.

STRAW BOARD

Perkins Goodwin & Co., Ryndam, Rotterdam, 427 rolls.

MISCELLANEOUS PAPER

Standard Products Corp., France, Havre, 176 cs.

Houbigant, Inc., France, Havre, 2 cs.

Distinctive Writing Paper Co., France, Havre, 8 cs.

Keller Dorian Paper Co., France, Havre, 18 cs.

Universal Car Loading Co., America, Bremen, 11 cs.

Steiner Paper Corp., Ryndam, Rotterdam, 86 cs.

P. C. Zuhlke, Ryndam, Rotterdam, 8 cs.

Globe Shipping Co., Ryndam, Rotterdam, 5 cs.

L. A. Consmiller, Dresden, Bremen, 2 cs.

Hensel, Bruckman & Lorbacher, Roussillon, Havre, 10 cs.

Hudson Forwarding Co., Roussillon, Havre, 2 cs.

P. J. Schweitzer, Roussillon, Havre, 17 cs.

Irving Sherman, Roussillon, Havre, 3 cs.

R. F. Downing & Co., Roussillon, Havre, 7 cs.

Portenoy Co., Roussillon, Havre, 2 cs.

RAGS, BAGGINGS, ETC.

E. Butterworth & Co., Inc., Cabo Espartel, Genoa, 62 bls. rags.

French American Banking Corp., Cabo Espartel, Genoa, 179 bls. rags.

Overton & Co., Cabo Espartel, Genoa, 41 bls. cotton waste.

Banco Com'l Italiane Trust Co., Cabo Espartel, Genoa, 89 bls. bagging.

French American Banking Corp., Cabo Espartel, Leghorn, 334 bls. rags.

Chase National Bank, Cabo Espartel, Marseilles, 11 bls. rags.

Interstate Trust Co., Cabo Espartel, Barcelona, 122 bls. rags.

W. Schall & Co., Cabo Espartel, Valencia, 53 bls. rags.

Darmstadt, Scott & Courtney, Cabo Espartel, Malaga, 62 bls. rags.

Equitable Trust Co., Hamburg, Hamburg, 28 bls. rags.

French American Banking Corp., Hamburg, Hamburg, 24 bls. rags.

Bank of The United States, Hamburg, Hamburg, 26 bls. rags.

Amtorg Trading Co., Hamburg, Hamburg, 675 bls. rags.

Amtorg Trading Co., Hamburg, Hamburg, 54 bls. flax waste.

Amtorg Trading Co., Hamburg, Hamburg, 52 bls. thread waste.

E. J. Keller Co., Inc., Hamburg, ——, 6 bls. rags.

National City Bank, Baltic, Liverpool, 28 bls. rags.

A. W. Fenton, Inc., America, Bremen, 40 bls. rags.

E. J. Keller Co., Inc., America, ——, 60 bls. rags.

D. I. Murphy, Sarcoxie, Havre, 343 bls. bagging.

Castle & Overton, Inc., Sarcoxie, Havre, 105 bls. bagging.

Guaranty Trust Co., Sarcoxie, Havre, 22 bls. rags.

C. Belsky, Sarcoxie, Havre, 97 bls. rags.

Katzenstein & Keene, Inc., Sarcoxie, Havre, 89 bls. rags.

Manufacturers Trust Co., Bannack, Manchester, 35 bls. new cuttings.

Equitable Trust Co., Bannack, Manchester, 104 bls. rags.

V. Seyen, Bannack, Manchester, 45 bls. cotton waste.

Leigh Textile Co., Bannack, Manchester, 50 bls. cotton waste.

International Purchasing Co., Bannack, Manchester, 38 bls. bagging.

E. A. Stone & Co., Ryndam, Rotterdam, 4 bls. rags.

New England Waste Co., Ryndam, Rotterdam, 50 bls. cotton waste.

Overton & Co., Ryndam, Rotterdam, 141 bls. bagging.

Chemical National Bank, Ryndam, Rotterdam, 32 bls. rags.

R. F. Downing & Co., Ryndam, Rotterdam, 71 bls. bagging.

Royal Manfg. Co., Ryndam, Rotterdam, 40 bls. cotton waste.

Katzenstein & Keene, Inc., Ryndam, Rotterdam, 445 bls. rags.

Darmstadt, Scott & Courtney, Ryndam, Rotterdam, 48 bls. bagging.

E. J. Keller Co., Inc., Ryndam, ——, 45 bls. rags.

Interstate Trust Co., Dresden, Bremen, 202 bls. rags.

E. J. Keller Co., Inc., Dresden, ——, 41 bls. rags.

Gallagher & Ascher, Minnekahda, London, 16 bls. rags.

B. D. Kaplan, Lancastria, Liverpool, 39 bls. rags.

Castle & Overton, Inc., Lancastria, Liverpool, 116 bls. paper stock.

Castle & Overton, Inc., London Corporation, London, 118 bls. waste.

Anglo South American Trust Co., London Corporation, London, 360 bls. rags.

Brown Bros. & Co., London Corporation, London, 140 bls. rags.

Whaling Waste Products Co., London Corporation, London, 87 bls. rags.

E. J. Keller Co., Inc., London Corporation, ——, 33 bls. threads.

E. J. Keller Co., Inc., Augvald, ——, 419 bls. rags.

French American Banking Corp., Augvald, Naples, 232 bls. rags.

Bank of The Manhattan Co., Augvald, Alexandria, 269 bls. rags.

Castle & Overton, Inc., Augvald, Alexandria, 198 bls. rags.

American Express Co., West Eldara, Antwerp, 8 blg. rags.

The Barrett Co., West Eldara, Antwerp, 110 bls. bagging.

Banco Com'l Italiane Trust Co., Roussillon, Havre, 205 bls. rags.

V. Galaup, Schodack, Bordeaux, 60 bls. rags.

A. W. Fenton, Inc., Schodack, Bordeaux, 210 bls. rags.

B. D. Kaplan, Schodack, Bordeaux, 24 bls. rags.

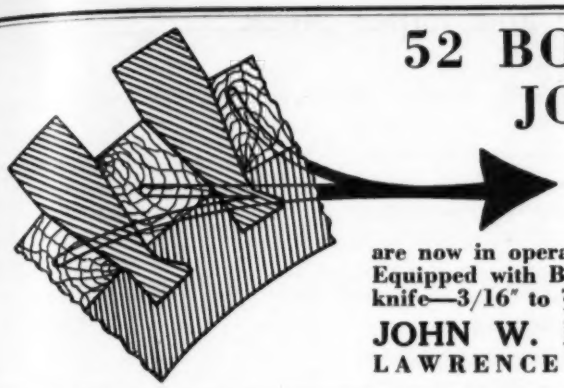
J. Cohen & Son, Inc., Schodack, Bordeaux, 32 bls. rags.

E. J. Keller Co., Inc., Schodack, ——, 47 bls. rags.

V. Galaup, Schodack, St. Nazaire, 90 bls. rags.

P. Berlowitz, Schodack, St. Nazaire, 76 bls. rags.

(Continued on Page 78)



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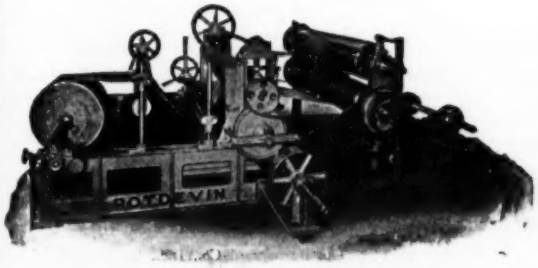

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Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens

Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener

Imports of Paper and Paper Stock

(*Continued from page 76*)

E. Butterworth & Co., Inc., Exanthia, Barcelona, 80 bls. bagging.

S. Birkenstein & Son, Exanthia, Barcelona, 178 bls. rags.

Castle & Overton, Inc., Exanthia, Barcelona, 76 bls. bagging.

E. J. Keller Co., Inc., Exanthia, ——, 48 bls. rags.

E. J. Keller Co., Inc., Francisco, ——, 299 bls. flax waste.

Castle & Overton, Inc., Kentuckian, West Coast, 64 bls. rags.

OLD ROPE

Amtorg Trading Co., Hamburg, Hamburg, 130 bdls.

E. J. Keller Co., Inc., Hamburg, ——, 34 coils.

Brown Bros. & Co., Minnekahda, London, 94 coils.

Brown Bros. & Co., Francisco, Hull, 50 coils.

International By-Products Co., Schodack, St. Nazaire, 41 bls., 54 rolls.

WOOD PULP

J. Andersen & Co., Vulcania, Trieste, 1,050 bls. wood pulp.

Chemical National Bank, Hamburg, Hamburg, 127 bls. wood pulp, 25 tons.

E. J. Keller Co., Inc., Chile Maru, ——, 650 bls. wood pulp, 101 tons.

J. Andersen & Co., Surichco, Sarpsborg, 648 bls. sulphite, 108 tons.

Irving Trust Co., Amasis, Hamburg, 507 bls. wood pulp, 102 tons.

WOOD FLOUR

A. Kramer & Co., Ryndam, Rotterdam, 400 bags.

——, Ryndam, Rotterdam, 400 bags.

BOSTON IMPORTS

WEEK ENDING MAY 4, 1929

Atterbury Bros., Inc., Natirar, Bremen, 1,050 bls. wood pulp, 173 tons.

W. Steck & Co., Natirar, Bremen, 11 bls. waste.

1st Nat'l Bank of Boston, Natirar, Bremen, 6 bls. rags.

Brown Bros. & Co., Missouri, London, 51 bls. waste paper.

Brown Bros. & Co., Missouri, London, 222 coils old rope, 24 bls.

G. M. Graves Co., Missouri, London, 200 bls. rags.

Crocker Burbank Co., Missouri, London, 276 bls. waste paper.

J. Andersen & Co., Surichco, Sarpsborg, 5,022 bls. sulphite, 837 tons.

The Borregaard Co., Inc., Surichco, Bamble, 1,200 bls. sulphate, 200 tons.

Sherwin Sheppard Co., Francisco, Hull, 12 bls. rags.

Brown Bros. & Co., Francisco, Hull, 145 coils old rope.

Sherwin Sheppard Co., West Eldara, Antwerp, 27 bls. rags.

Draper & Co., West Eldara, Antwerp, 28 bls. rags.

State St. Trust Co., West Eldara, Antwerp, 33 bls. flax waste.

National Shawmut Bank, West Eldara, Antwerp, 13 bls. rags.

2nd National Bank of Boston, West Eldara, Antwerp, 7 bls. rags.

Masurel Worsted Mills, Inc., West Eldara, Antwerp, 2 cs. parchment paper.

Train Smith & Co., West Eldara, Antwerp, 210 bls. rags.

Baring Bros. & Co., West Eldara, Antwerp, 41 bls. rags.

Bank of Commerce & Trust Co., West Eldara, Antwerp, 23 bls. rags.

E. Butterworth & Co., Inc., West Eldara, Antwerp, 115 bls. flax waste.

E. J. Keller Co., Inc., Bellepline, ——, 148 bls. bagging.

Castle & Overton, Inc., Bellepline, Holland, 1,871 bls. wood pulp.

Castle & Overton, Inc., Westpool, Germany, 55 bls. rags.

Bulkley, Dunton & Co., Aggersund, ——, 8,875 bls. wood pulp.

Bulkley, Dunton & Co., Malaren, ——, 600 bls wood pulp.

Bulkley, Dunton & Co., Burgerdyk, ——, 284 bls. wood pulp.

Bulkley, Dunton & Co., Lorain, ——, 125 bls. wood pulp.

Bulkley, Dunton & Co., Malmen, ——, 2,100 bls. wood pulp.

NEWPORT NEWS IMPORTS

WEEK ENDING MAY 4, 1929

Castle & Overton, Inc., Bellepline, Rotterdam, 1,780 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING MAY 4, 1929

Castle & Overton, Inc., F. Luckenbach, Japan, 8 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 4, 1929

D. I. Murphy, Natirar, Bremen, 179 bls. rags.

Chemical National Bank, Natirar, Bremen, 19 bls. rags.

E. J. Keller Co., Inc., Natirar, ——, 50 bls. rags.

Castle & Overton, Inc., Sarcoxie, Havre, 141 bls. rags.

National Vulcanized Fibre Co., Sarcoxie, Havre, 69 bls. rags.

D. I. Murphy, Sarcoxie, Havre, 304 bls. rags.

Katzenstein & Keene, Inc., Sarcoxie, Havre, 82 bls. rags.

G. Mathes & Co., Sarcoxie, Havre, 38 bls. rags.

Warren Manfg. Co., Sarcoxie, Havre, 207 bls. bagging.

The Lang Co., Sarcoxie, Havre, 427 bls. rags.

Castle & Overton, Inc., Sarcoxie, Dunkirk, 319

D. I. Murphy, Sarcoxie, Dunkirk, 243 bls. rags.

Castle & Overton Sarcoxie, Dunkirk, 319 bls. rags.

Katzenstein & Keene, Inc., Sarcoxie, Dunkirk, 145 bls. rags.

Congoleum Nairn Co., Sarcoxie, Dunkirk, 70 bls. thread waste.

Atlantic Paper Corp., London Corporation, Dundee, 11 cs. printing paper.

Brown Bros. & Co., London Corporation, Dundee, 49 bls. rags.

Banco Com'l Italiane Trust Co., Augvald, Naples, 140 bls. rags.

Interstate Trust Co., Augvald, Naples, 69 bls. rags.

French American Banking Corp., Augvald, Naples, 68 bls. rags.

D. I. Murphy, West Eldara, Antwerp, 84 bls. rags.

Castle & Overton, Inc., West Eldara, Antwerp, 762 bls. rags.

Equitable Trust Co., West Eldara, Antwerp, 70 bls. rags.

Brown Bros. & Co., West Eldara, Antwerp, 191 bls. rags.

J. L. Shoemaker & Co., West Eldara, Antwerp, 4 cs. paper.

Darmstadt, Scott & Courtney, West Eldara, Antwerp, 39 bls. rags.

Salomon Bros. & Co., West Eldara, Antwerp, 118 bls. rags.

Salomon Bros. & Co., Schodack, St. Nazaire, 109 bls. rags.

V. Galaup, Schodack, St. Nazaire, 33 bls. old rope.

Castle & Overton, Inc., Schodack, St. Nazaire, 326 bls. rags.

P. Berlowitz, Schodack, St. Nazaire, 142 bls. rags.

Katzenstein & Keene, Inc., Schodack, St. Nazaire, 247 bls. rags.

Goldman Sachs & Co., Schodack, St. Nazaire, 89 bls. rags.

Castle & Overton, Inc., Schodack, Bordeaux, 459 bls. rags.

A. W. Fenton, Inc., Schodack, Bordeaux, 304 bls. rags.

Katzenstein & Keene, Inc., Schodack, Bordeaux, 249 bls. rags.

S. E. Ingber, Schodack, Bordeaux, 90 bls. rags.

D. I. Murphy, Schodack, Bordeaux, 233 bls. rags.

J. W. Hampton, Jr., & Co., Schodack, Bordeaux, 385 bls. rags.

Brown Bros. & Co., Schodack, Bordeaux, 118 bls. rags.

Robert Blank, Schodack, Bordeaux, 87 bls. rags.

E. J. Keller Co., Inc., Schodack, ——, 166 bls. rags.

Castle & Overton, Inc., Exanthia, Barcelona, 571 bls. rags.

Castle & Overton, Inc., Wytheville, Rotterdam, 248 bls. rags.

Castle & Overton, Inc., Crefeld, Germany, 52 bls. rags.

Bulkley, Dunton & Co., Malmen, ——, 1,625 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING MAY 4, 1929

The Borregaard Co., Inc., Surichco, Bamble, 600 bls. sulphate, 100 tons.

Congoleum Nairn Co., Schodack, St. Nazaire, 51 bls. rags.

Congoleum Nairn Co., Schodack, Bordeaux, 402 bls. rags.

Castle & Overton, Inc., Bellepline, Rotterdam, 960 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING MAY 4, 1929

Dixie Jute Bagging Corp., Bannack, Manchester, 137 bls. bagging.

Atlantic Jute Mills, Inc., Bannack, Manchester, 54 bls. bagging.

The Borregaard Co., Inc., Surichco, Hurum, 3,000 bls. sulphate, 500 tons.

The Borregaard Co., Inc., Surichco, Bamble, 1,200 bls. sulphate, 200 tons.

J. Andersen & Co., Surichco, Sarpsborg, 1,200 bls. sulphite, 200 tons.

Beisler, Weidmann & Co. To Build

NEWARK, N. J., April 27, 1929.—Several months ago the Beisler, Weidmann Company, paper, bags, cartons, wrappings and specialties, purchased a plot of ground in Belleville, N. J., situated on the Newark Branch of the Erie Railroad, and had a siding constructed to serve the property. During the coming week the company will start construction of a warehouse, garage and office containing approximately 30,000 square feet on one floor. The building will be of brick and heavy mill construction.

Acquire Mills of Robertson Co.

KEENE, N. H., May 7, 1929.—Frank W. Jeffords and Clarence B. O'Neal, both of Hinsdale, have acquired ownership of the Robertson company, operators of three paper mills at Ashuelot. They have purchased the interests of the late W. F. Robertson and Mr. Jeffords' daughters, Miss Rose Helen, and Miss Eleanor I. Jeffords. Mr. Jeffords and Mr. O'Neal have been connected with the Robertson company in executive capacities for the past 12 years.

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Automatic Roll Grinding Machines
Improved Micrometer Roll Calipers

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Established 1836
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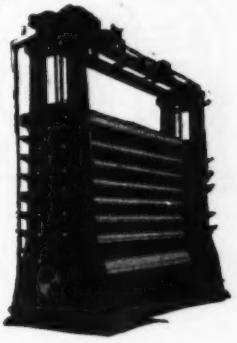

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of Purified Cellulose Fibre representing some of the valuable results of our many years of research in cellulose chemistry.

SUPER ALPHA

for strength in Tear, Fold and Mullen. Super Alpha equals the higher grades of rags in the manufacture of fine papers.

EASY-BEATING ALPHA

This is a grade developed for mills of limited beating capacity. While not giving results equal to Super Alpha, it produces wonderful paper on short beating.

REGULAR ALPHA

This is a grade midway between Super and Easy-Beating.

Use ALPHA for Quality

BROWN COMPANY — FOUNDED 1852 — Portland, Maine

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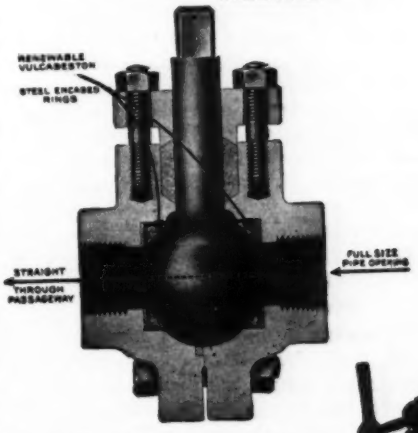
The Perfect "Blow-Off" Valve
PATENTED



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CASEIN

Our new Casein Department is under the management of G. W. DYNE, who needs no introduction to the Coated Paper Trade.

We invite your inquiries upon Domestic, Argentine, French and other imported Caseins.

American-British Chemical Supplies Inc.
16 East 34th Street,
New York City.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, May 8, 1929.

There were no pronounced changes recorded in the local paper market during the past week. Demand for the various standard grades was mostly along routine lines. Shipments are proceeding at a normal pace. Sales forces of the leading paper organizations are keeping up their efforts to secure new business. Prices are generally holding up to schedule.

Production of news print paper was maintained during the past week at 84 per cent of capacity of the United States and Canada, according to statistics gathered by the News Print Service Bureau. Shipments averaged 81 per cent of rating. Advertising and circulation of the leading newspapers continue to expand and the outlook is more promising than for some time.

Some improvement was noticed in the paper board market. Prices are gradually becoming firmer. Chip is now quoted at $35 and news at $37.50. Single manila lined chip is offered at $47.50. The fine paper market is exhibiting a strong undertone. Tissues are two weeks ahead, with prices steady. The coarse paper market was only moderately active.

Mechanical Pulp

The ground wood market is displaying a firmer trend, due mainly to the recently reported agreement on selling policies and prices made by Norwegian, Swedish and Finnish producers. No. 1 imported moist mechanical pulp is now quoted at from $30 to $33, while No. 1 domestic mechanical pulp is selling at from $26 to $30.

Chemical Pulp

Steadiness continues to prevail in the chemical pulp market. Manufacturers of both foreign and domestic grades are well sold ahead. Bleached sulphite and easy bleaching sulphite are still exhibiting a strong undertone. Prices are unchanged, in most instances, and shading is infrequent.

Old Rope and Bagging

The old rope market is in a sound position. Both domestic and imported manila rope are in excellent request, with offerings limited and prices steady to firm. The bagging market is showing signs of improvement. Scrap bagging is in better demand and gunny scrap is moving in good volume. Prices remain unchanged.

Rags

No radical changes were reported in the domestic rag market. Practically all grades are in fairly satisfactory request and prices are holding up to the levels previously recorded. Roofing rags are moving at a normal pace. The foreign rag market was rather quiet. Prices remain unchanged, in most instances.

Waste Paper

Paper mill demand for the higher grades of paper stock is fairly persistent. Soft white shavings are in a better position than for some time past with prices steady to firm. Old kraft machine compressed bales are also exhibiting an improved trend. Offerings of the lower grades are sufficient to take care of the prevailing request, which is rather light.

Twine

Conditions in the local twine market were fairly satisfactory during the past week. There was a slight falling off in demand due mainly to seasonal causes, but the position of the industry is still sound, in the opinion of most observers. Prices are generally holding to previously quoted levels and there is not much talk of concessions around.

Canadian Paper Exports Increase

Canada's exports of pulp and paper in March were valued at $19,256,954, according to the report issued by the Canadian Pulp and Paper Association. This was an increase of nearly $5,000,000 over the total for February but was less than that for March 1928 by $457,340.

Wood pulp exports in March were valued at $4,014,293 and exports of paper at $15,242,661, as compared with $3,198,828 and $11,201,114 respectively in the previous month.

Details for the various grades of pulp and paper exported in March 1929 and 1928 are as follows:

	March, 1929		March, 1928	
PULP:	Tons	$	Tons	$
Mechanical	13,090	364,150	15,161	414,621
Sulphite bleached	25,254	1,911,072	33,930	2,519,199
Sulphite unbleached	16,160	812,677	22,186	1,125,699
Sulphate	14,654	881,210	16,812	985,901
Screenings	2,297	45,184	3,025	57,302
	71,455	4,014,293	91,114	5,102,722
PAPER:				
News print	244,167	14,612,542	216,160	13,899,293
Wrapping	1,569	168,332	1,900	210,142
Book (cwts.)	9,930	84,002	8,585	68,442
Writing (cwts.)	182	1,216	328	2,212
All other	.....	376,569	.....	431,483
	.....	15,242,661	.....	14,611,572

For the first quarter of the current year exports of pulp and paper were valued at $49,793,094 as compared with a total of $49,274,124 in the first three months of 1928, an increase for this year of $518,970.

Wood pulp exports for the three months were valued at $10,858,275 as compared with $11,577,381 in the corresponding months of 1928. This was a decline for the current year of $719,106 but the decline in wood-pulp shipments was more than offset by the increase in exports of paper which were valued at $38,934,819 as compared with $37,696,743 in the first quarter of last year, an increase for this year of $1,238,076.

Quantities and values for the first quarter of 1929 and 1928 are as follows:

	3 Months, 1929		3 Months, 1928	
PULP:	Tons	$	Tons	$
Mechanical	39,788	1,060,545	40,309	1,065,422
Sulphite bleached	69,340	5,283,358	67,652	5,061,958
Sulphite unbleached	45,177	2,257,785	54,431	2,773,383
Sulphate	35,642	2,139,463	43,229	2,553,405
Screenings	5,827	117,124	6,445	123,213
	195,774	10,858,275	212,066	11,577,381
PAPER:				
News print	613,683	37,201,883	557,040	35,962,346
Wrapping	4,492	488,932	4,997	550,203
Book (cwts.)	23,391	192,587	16,899	135,922
Writing (cwts.)	1,242	10,552	1,525	13,955
All other	.....	1,040,865	.....	1,034,317
	.....	38,934,819	.....	37,696,743

Pulpwood exports in the first three months of the year amounted to 341,266 cords valued at $3,062,888 as compared with 466,949 cords valued at $4,145,448 exported in the first quarter of 1928.

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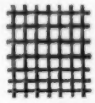

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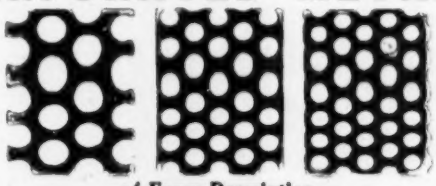

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, May 8, 1929.

BLANC FIXE.—Trading in the blanc fixe market during the week was mostly along routine lines. Prices are generally holding to previously quoted levels. The pulp is selling at from $42.50 to $45.00 per ton, while the powder is offered at from 3¼ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is practically unchanged. Shipments against contract are going forward in normal volume for the season. Prices remain unaltered. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works, according to quantity and grade.

CASEIN.—Steadiness prevails in the casein market. Prices are well maintained. Domestic casein is still quoted at from 16 cents to 16¼ cents per pound, while standard ground imported is selling at 16 cents per pound and finely ground at 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is in a sound position. Contract shipments are moving in good volume. Prices remain unchanged. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Most of the demand for china clay during the week was along routine lines. Contract shipments were normal. Prices remain unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market continues fairly active. The contract movement is well up to average. Prices are steady. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ cents to 3½ cents per pound.

ROSIN.—Demand for rosin is irregular. At the naval stores, the grades of gum rosin used in the paper mills are quoted at from $8.25 to $8.35 per 280 pounds, in barrels, ex dock. Wood rosin is still selling at from $6.60 to $7.40 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—The salt cake market is exhibiting a strong undertone. Demand for this product is quite persistent and offerings are limited. Prices are steady to firm. Salt cake is quoted at from $16 to $18 per ton, while chrome salt cake is selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Conditions in the soda ash market are satisfactory. Supplies are moving into consumption at an excellent pace. Prices are holding to schedule without difficulty. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—No radical changes were recorded in the starch market during the week. Demand was moderately active and prices were maintained at the levels recently quoted. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market is displaying a steady trend. Offerings are sufficient to take care of current requirements. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 and iron free at from $1.95 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Supplies of sulphur continue to move into consumption in good volume. Prices are steady to firm. Sulphur is quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—The talc market continues to exhibit a normal tone. Shipments against contract are well up to average. Prices are holding to schedule. Domestic talc is still quoted at from $16 to $18 per ton, at eastern mines, while imported talc is offered at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@ —
Straw	52.50	@55.00
Chip	35.00	@ —
Binders' Boards	65.00	@70.00
Sgl. Mla. Ll. Chip.	47.50	@ —
Wood Pulp	80.00	@85.00
65 Test Jute Liner.	52.50	@ —
85 Test Jute Liner.	55.00	@ —

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	30.00	@33.00
Dry	32.00	@34.00
(F. o. b. Mill)		
No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.40
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	2.60	@ 2.80
Mitscherlich unbleached	2.60	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.40	@ 2.75
No. 2 Kraft	2.35	@ 2.50
Sulphate—		
Bleached	3.60	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.85
News Sulphite	2.40	@ 2.50
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.25	@ 3.40
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Strictly Folded	.58	@ .63
No. 1 Mixed Paper	.45	@ .50
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.50	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.50	@ 8.25
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.20	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.90	@ 2.00
Dark Cottons	1.60	@ 1.65
Old Shopperies	1.55	@ 1.60
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.65	@ 1.75
Bright Bagging	1.65	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.40	@ 4.65
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.50	@ 2.60
White envelope cuttings	3.00	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag.	1.60	@ 1.70
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.10	@ 1.20
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.58	@ .63
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.80	@ 1.90
News—		
No. 1 White News	1.65	@ 1.75
Blue Overall	7.50	@ 8.00
Strictly Overissue	.75	@ .80
Strictly Folded	.55	@ .60
No. 1 Mixed Paper	.43	@ .48
Common Paper	.30	@ .35

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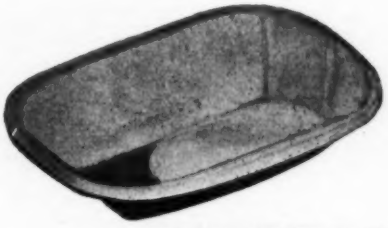

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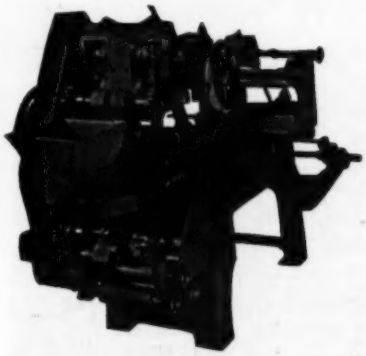

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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.34
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¼	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¾	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¾	@	.06½
Southern Kraft	.03¼	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½

(Delivered Central Territory)

News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.45	@	1.50
Solid Books	1.25	@	1.40
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.80	@	.85
Folded News (overissue)	.80	@	.85
Old Newspapers—			
No. 1	.70	@	.80
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.65	@	.70
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04

(Delivered Philadelphia)

News Print Rolls	62.00	@	—
Straw Board	52.00	@	75.00
News Board	35.00	@	40.00
Chip Board	32.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03¼
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08¼	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.35	@	1.40
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Board, Chip	.65	@	.70
Overissue News	.85	@	.90
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.06½
No. 2 Kraft	.05¼	@	.06
Common Bogus	.02	@	.02¾

Delivered New England points

News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00

(F. o. b. Mill)

Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.15	@	1.20
White Blank News	1.60	@	1.65
Old Kraft	—	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	.50	@	.52½
Overissue News	.65	@	.80
Old Newspapers	—	@	.55
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.60
Manila Rope—			
Foreign	—	@	5.00
Domestic	5.00	@	—
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.35
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	—	@	1.65
Wool Tares, heavy	—	@	1.37½
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	2.75	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03¼
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.50	@	—
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.10	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	11½	@	—
Fancy Shirt Cuttings	.05½	@	—

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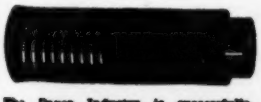
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Pressure Pipe That Never Bursts.
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CONSULTING ENGINEERS
171 Madison Ave. New York City

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall Street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 1937	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Orange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¾	10¾
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	75	80
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co., 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp & Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	107
Whitaker Paper, 7% Cum. Pfd.	105	None Off.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., May 6, 1929.—Indications are that the special Pullman car to be provided for Boston members of the New England Paper Merchants Association planning to attend the meeting at New Haven May 7 and 8 will be well filled. All were urged to go at the luncheon meeting of the Fine Paper Division at the Boston Chamber of Commerce last Tuesday. President Arthur E. Ham presided and there was a good attendance.

Carter Rice & Co. Corporation has selected products of the Falulah Paper Company, Fitchburg, Mass., on which to concentrate advertising and other selling efforts this month. At a meeting to be held at the Carter Rice office here representatives of the Falulah Company will speak. Displays on Falpaco Blanks are to be seen inside the entrance leading to the office.

Carter Rice & Co. Corporation is laying plans to merchandise and advertise the Strathmore Announcement line when ready for distribution. The lines of the Strathmore Paper Company of Mittineague and Woronoco, Mass., will be converted by the Old Colony Envelope Company into a very extensive line of business and social announcements. This will probably be ready in the fall. In anticipation, the Carter Rice company is preparing a selected list of announcement users, to whom this advertising material will be distributed. For the present the list will be used in circularizing these announcement prospects with exceedingly attractive folders advertising the Old Colony line of weddings.

Henry Austin, senior partner in the firm of E. Austin & Sons, London, England, who, with his family, is visiting this country, called on members of the paper stock trade last week.

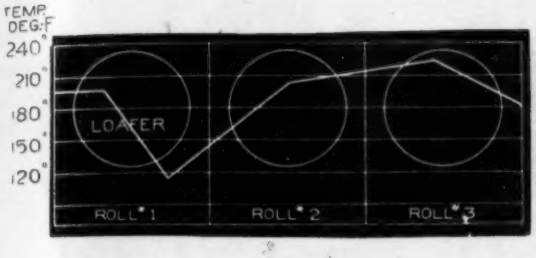
Ex-Governor Huntley N. Spaulding, New Hampshire, vice-president and treasurer of the Spaulding Fibre Company, North Rochester, N. H., has returned from a trip to the West. His brother, Roland H. Spaulding, also an ex-Governor of New Hampshire, president of that company, called on the Boston trade last week.

Elliott Rogers, president of the Rogers Fibre Company, Bar Mills and East Poland, Me., and president, Associated Industries of Maine, has been chosen a member of the recently organized industrial committee of the New England Council.

E. J. Trimbey Get Canadian Patent

GLENS FALLS, N. Y., May 4, 1929.—The Trimbey Machine Works of this city has obtained a Canadian patent for an improved process and apparatus for screening paper pulp. A similar patent is pending in this country. The patent was issued in the name of E. J. Trimbey, of the Trimbey Machine Works on Dix avenue. Several of the screens are in operation now in this country and one is being built for shipment to Germany. Inquiries have also been received from numerous concerns in Japan, Italy and Switzerland. The patent is a radical departure in the design of pulp screens and is quite different from anything now on the market along this line. The trade name of the Trimbey-Shevlin Screen is to be used for the new invention. Along the regular line of work, of consistency regulators and metering systems, the company has just made shipment of three regulators and one metering system to Melbourne, Australia, and one metering system will soon be shipped to London, England. The big plant in this city is operating at full capacity in all departments with prospects for continuing these schedules indefinitely.

Cambridge Instruments



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DRYING EFFICIENCY depends on *Team Work* between the Drying Rolls. Uneven drying means irregular stock.

Use of CAMBRIDGE SURFACE PYROMETER quickly locates the dead, water logged loafers. A glance at the dial shows the surface temperature of every roll. The machine man does not have to guess —HE KNOWS.

CAMBRIDGE SURFACE PYROMETER keeps every pound of steam at work and every roll on the job, instead of carrying a dead load of water.

Use of CAMBRIDGE SURFACE PYROMETER means steam saved, improved production and greater all round efficiency of the drying machines. It saves its moderate cost many times in a year.

Write for list 21

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

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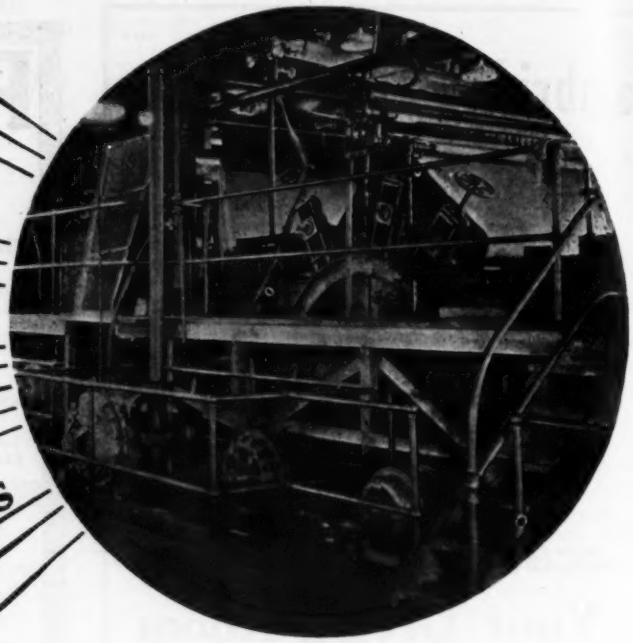
One Sheet

No Laminations



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